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A BRIEF FOR THE LINCOLN HIGHWAY
IN UTAH AND NEVADA

ADDRESSED TO
THE SECRETARY OF AGRICULTURE
WASHINGTON, D. C.

A STUDY OF WESTERN ROAD
STRATEGY DESIGNED TO AID
IN DETERMINING THE ROAD
OF MOST IMMEDIATE IMPORT-
ANCE CONNECTING SALT
LAKE CITY, UTAH, WITH
CALIFORNIA

Prepared by
The National Headquarters
THE LINCOLN HIGHWAY ASSOCIATION
DETROIT, MICHIGAN

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IN UTAH AND NEVADA

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MARCH 15, 1923

Prepared by
The National Headquarters
THE LINCOLN HIGHWAY ASSOCIATION INC.
DETROIT, MICHIGAN

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*Incorporated as an Association not for pecuniary profit, under the
laws of the State of Michigan, June 24th, 1913*

1923

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Gift-
Lincoln Highway Area
July 24 - 23

LETTER OF TRANSMITTAL

To the HON. HENRY C. WALLACE
Secretary of Agriculture
Washington, D. C.

March 15, 1923

Dear Sir:

We feel that the importance of this entire question makes it unnecessary for us to apologize for the length to which we have gone in submitting, in this Brief, the results of ten years of consideration and investigation and study. We have tried to present as clear a picture as possible and to omit no data or argument which might be of use or benefit to your Department in reaching whatever conclusion it may deem wise.

We believe it will be a logical deduction, from the study of such facts as we have presented and from a consideration of the basic elements of policy we have discussed, that the present Lincoln Way is the most important route to be first completed. We trust that it will be appreciated that we have not sought to convince by mere bald assertions or by the expression of our opinions only, but rather by the presentation of facts and by logical argument based upon conditions well known.

To us our conclusions seem absolutely sound, right and logical. It is our sincere hope that we may be successful, through our painstaking endeavor, in presenting to you the picture we possess, that you may also gain our conviction.

The Lincoln Highway Association cheerfully and confidently transfers its responsibility in the premises to the Secretary of Agriculture of the United States.

Respectfully submitted,

THE LINCOLN HIGHWAY ASSOCIATION.

J. NEWTON GUNN, *President.*

AUSTIN F. BEMENT, *Vice-President and Secretary.*

FRANK A. SEIBERLING, *Vice-President and Past President.*

HENRY B. JOY, *Vice-President and Past President.*

SIDNEY D. WALDON, *Director.*

GAEL S. HOAG, *Field Secretary.*

COLLABORATORS.

E. G. N. 81.23



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PREFACE

PRIMARILY, this Brief proves that the Lincoln Highway west of Salt Lake City, Utah, is the one route of first, national, strategic, correlating importance to serve all travel to the Pacific Coast south of Portland, Oregon.

In substantiating the above we prove:

That in seeking the route of primary importance to be first constructed with Government aid west of Salt Lake City the interests of the through traffic should be the paramount factor.

That the local traffic in the areas traversed is inconsequential and of minor importance in the problem before you for solution.

That the through traffic west of Salt Lake City is bound to or from California points.

That the travel between Salt Lake City and southern California is more than 50% of all through travel west of Salt Lake and deserves as much consideration as the travel between Salt Lake City and central and northern California.

That the Arrowhead Trail from Salt Lake City to Los Angeles is not the most satisfactory route possible for travel between those two points.

That it is important to find, if possible, a road across western Utah of use to travel between Salt Lake City and all California points.

That it is important also, if possible, to provide that travel leaving Salt Lake City for central and northern California with a route open later in the Fall and earlier in the Spring than any direct route through the Sierras.

That the strategic location of the Lincoln Way provides the only possible route to best serve travel to and from all parts of California.

That the Lincoln Highway is the shortest route to California from Salt Lake City.

That time and money are important factors in view of the waiting traffic.

That the states traversed cannot afford to entirely build to Government standard any route under consideration for many years.

That the important element, therefore, is not the total cost to complete, but the cost to open for the through travel.

That the Lincoln Highway can be opened first and at least cost.

That the completion of existing construction contracts on the Lincoln Highway will open a satisfactory route between Salt Lake City and both northern and southern California.

That the historic interest and scenic beauty of a route for tourist travel should be given consideration in locating it.

That the Lincoln Highway across Nevada is the route of greatest interest and beauty.

That it is of vital importance to correctly locate the road across the desert in western Utah; its wrong location would definitely control the destination of, and the route to be followed by, vast volumes of future traffic.

That the Lincoln Highway desert crossing has been proven the practicable and feasible one; while the crossing to Wendover is an unsolved problem, where all attempts at building have failed.

That the opening of the Lincoln Way desert crossing will save \$1,000,000.00 as compared with the opening of the northern crossing.

That the people of Tooele County, Utah, want the Lincoln Highway built and will provide funds to aid its construction; while the other crossing of the desert cannot be financed by customary methods, if at all.

That the local travel of central and southern Nevada urgently requires the opening of the Lincoln Way desert crossing in Utah.

That the local travel of northern Nevada does not require the opening of the northern crossing of the desert in Utah.

That both routes across Nevada into central California will be promptly opened to travel, regardless of what road is built in Utah.

That the road from Wendover, Utah, to Schellbourne Junction, Nevada, would not, under any circumstances, be built for many years, and would be an extravagant waste of money.

That the people, the Legislature, the State Highway Commission and the Governor of Nevada want the Lincoln Highway in Utah promptly opened.

That it is not wise to try and connect the two natural main roads across Nevada into one road across western Utah, thus requiring the building of unneeded road mileage in Nevada to save the building of needed mileage in Utah.

That the real problem is not to save mileage, but to serve traffic.

That the problem now under consideration is a complex one involving many highly important factors not considered in the Government engineers' report on the subject.

That the engineering report incorrectly states the problem and undertakes to solve it from fallacious basic assumptions.

That much of the data presented in the engineering report has little bearing on the true problem of serving the travel.

That there are excellent grounds for believing that the estimates of construction costs in the engineering report are not accurate.

That the western controversy in connection with the problem before you is the result of the efforts of strongly biased areas, naturally desirous of procuring for themselves the highly important benefits of the tourist travel—which means hundreds of millions of dollars in the future.

That any other road than the Lincoln Highway would merely serve better the business interests of one or more of these western areas at the expense of the others, while less advantageously serving all the traffic.

That the Lincoln Highway Association has no bias in studying the western road situation; its viewpoint being

the same broad, national one from which the Federal Government considers the problem.

That Utah State officials and the Lincoln Highway Association were in full accord as to the route in Utah for eight years following its establishment through Utah, in 1913.

That we have a valid contract with the State of Utah, calling for the completion of the Lincoln Highway crossing of the Great Salt Lake Desert, the repudiation of which the Government cannot, in justice, sanction.

That as it has at last become possible for Utah to build a western outlet, the needs of through travel, the demands of Nevada, the more early and more certain and ready means of financing, and the moral obligation under which she rests, all clearly indicate that she should devote her first available funds to the completion of the Lincoln Highway.

INTRODUCTION

BEFORE undertaking to present for your consideration some of the data which officials of the Lincoln Highway Association have been carefully gathering for more than ten years and which we feel confident will aid you in reaching a proper and right decision with regard to the western connections in the basic arterial road system of the United States, we wish to first express appreciation for the opportunity, not only in behalf of the Lincoln Highway Association, which feels signally honored in your recognition of its long study of western road problems, but also in behalf of all those far-seeing citizens who have, through a decade, supported and encouraged the Association's work.

THE IMPORTANCE OF THE PROBLEM CONSIDERED

We feel that the decision you are now called upon to reach is one of vast importance. It affects for years to come the entire trend of traffic between the Rocky Mountains and the Sierra Nevadas. Should we be able, as a result of the long study we have made of the situation involved, to present to you some additional light on the problem which will aid toward a correct decision, for that reason alone, and without taking into consideration the other accomplishments of the Association since its organization in 1913, our whole work and effort would be justified.

We want also to express appreciation for the painstaking effort and the care your Department has put forth to secure all possible information bearing upon this decision. We appreciate that your effort is to sift every grain of available information bearing upon the subject before making a decision and we hope that your courtesy in extending to representatives of this Association an opportunity to study the data compiled by your

engineers may be repaid by the additional light which this study may enable us to shed on certain aspects of the situation we believe are of commanding importance.

Our Vice-President, Mr. Henry B. Joy, in his letter to you of November 10th, 1922, urged that the Association be allowed to study the report of your engineers and present to you this Brief before a final decision was reached, because, as he expressed it, "there might be some things of great value to you in deciding the case which we could add to the picture." As Mr. Joy pointed out in that letter, the engineers representing your Department were at work upon this problem, in studying the physical features of the routes they took under consideration, for a few months, while our organization, which includes many active interested local residents in the areas under consideration, has been making a particular study of all phases of the problem for ten years.

The very complete and satisfactory opportunity given officials of the Association to carefully study and digest the data prepared for your consideration by the engineers of the Bureau of Public Roads has, we feel, proven the wisdom of permitting us the opportunity, for we are confident we can present in the following pages much additional light on the problem which it is our hope will be of value to you in supplementing the very careful and thorough engineering data presented in that report.

OUR PICTURE TO BE PRESENTED

We do not assume that we will, in the following Brief, present much of anything new as to engineering data regarding topography, terrain traversed, population, or other purely statistical compilations relative to the routes now before your Department for consideration and decision. In a few instances the information at our disposal does differ from that provided you by your engineers, and these differences will be pointed out. We do, however, expect to present a picture of the route strategy of the western area under consideration which we have absorbed during ten years or more of intimate contact and which is more than likely to be new to your Department now approaching the matter for the first

time, and also possibly new to the interested public at large and to the press of the United States, both of which have given much material support to the great object we have had so long in view and which now so closely coincides with the aims of your Department.

It is our hope that we may be able to present to you in this Brief the impressions which we have absorbed in ten years as to the wisdom and broad practicability of our contentions, to the end of convincing you, Mr. Secretary, that the subject we are discussing is one of the utmost importance, involving a decision which is probably the most important ever to be presented to a Secretary of Agriculture. We hope also to convince you that this Association has made a careful and conscientious effort to be right and to convince you, only by sound reasoning and true facts, that its position is correct.

THE REPORT OF THE GOVERNMENT ENGINEERS

The engineering report which we have studied, and which is now before you, reduces this western road problem to a simplicity which, we regret, we cannot agree is feasible. The problem is not so simple as it is stated arbitrarily to be by your engineers, nor can the solution be determined by the securing of the facts to answer a few simple questions in regard to distance, grade, population, etc. We regret that the problem is not one simply stated and easily determined by securing, through investigation, the answers to a relatively few questions as to comparative physical aspects. We regret it because, if such were the case, our present task would be so much easier and more certain of success.

The engineering report prepared at your direction is admirable and we take pleasure in commending and praising in the highest degree the detailed data gathered by your engineers during the summer months of 1922 and the care and effort which these gentlemen have unquestionably put into the work of providing you with tables of distances, elevations, estimates of costs, etc.

We especially do not wish you to feel that we intend to argue or seem to argue in this Brief about any petty

differences as to unimportant details in your engineering report. The data compiled by your engineers is enlightening and, while we do not in the slightest degree wish to belittle the due weight which should be given to it, it is but fair to state that the data and estimates of different engineers have been known to differ. So, also, have been known to differ the conclusions which different engineers may draw from the same data. Again it may be said that frequently, by reason of the different viewpoint of the principals who may have sent the engineers into the field to gather the data, the principals reach different conclusions, from the data of the engineers, than the engineers themselves reached.

This condition is but natural when we consider the responsibility of the principal for the success or failure of an enterprise or plan and when we consider that the viewpoint of the principal may cover a wider area and his vision be more keenly sensitized by his position of responsibility.

THE ASSOCIATION'S BROAD VIEWPOINT

We feel that in this question the viewpoint which the Lincoln Highway Association has taken, or has endeavored to take, is identical with that which the Secretary of Agriculture must, because of his position, endeavor, himself, to take. We cannot then, much to our regret, present what we have to say in regard to this situation as briefly or as concisely as your engineers have placed their data before you. We cannot, as they were given to do, arbitrarily compress the problem into a sentence and endeavor to answer it with tables of data.

Unfortunately, the picture we wish to present to you must be presented in words and must take into consideration and touch upon a great many matters unheeded, and perhaps rightly so, in your engineering report.

We appreciate fully that your engineers were given a problem to solve with information which they were to secure as engineers. We are perhaps not wrong in assuming that you hoped to get from us and other organizations and individuals long and closely in touch with aspects of the problem which do not fall under

engineering consideration, the information which when submitted together with the data provided by your engineers, would enable you to reach a decision based upon all the elements involved.

We sincerely hope that in considering our presentment of the situation it will be understood that our aim is not to tear down or vitiate the carefully marshalled facts provided by your engineers, but rather to throw such additional light as we can upon these facts and to paint a broad picture of the western road strategy and prove that this strategy of route location is fundamentally more important than all of this detailed data, which, nevertheless, is so essential also to a full consideration of the matter.

It has been a work of intense interest to us to gather and present this information and we hope that that interest, to some extent, may be reflected and result in your careful consideration of all we have to say. We have studiously endeavored to exclude all extraneous matter. We appreciate fully that the problem involved lies in its entirety west of Salt Lake City, Utah. We will endeavor later to briefly formulate this specific problem as we see it, but first we feel that a brief presentation of the basic principles upon which the Lincoln Highway was founded and upon which this organization has operated for ten years will serve a real purpose in throwing light upon the manner in which we have approached the specific problem west of Salt Lake City.

CHAPTER I

THE BASIC PRINCIPLES OF LINCOLN WAY ROUTE SELECTION

IN the original "Proclamation of Route of the Lincoln Highway" issued on the 10th day of September, 1913, we read the following declaration of purpose and guiding principles:

WHEREAS

The purpose of this Association is to immediately promote and procure the establishment of a continuous improved highway from the Atlantic to the Pacific, open to lawful traffic of all descriptions and without toll charges, and

WHEREAS

Toward the end of accomplishing this purpose elaborate research and investigation has been prerequisite to crystallization of opinion before intelligent and wise decision could be reached, and

WHEREAS

This Association expressly desires to impress upon all the people that it fully acknowledges that a public declaration by it of a route is of no force or effect except as it shall be wise and practical, and, being so, meet with the approval of the people for such a useful and enduring memorial, and

WHEREAS

It is obvious that this Association can only aid and co-operate toward the desired end, and that UPON ALL THE PEOPLE, and especially upon the officials of each State and County and upon the inhabitants thereof, within the borders of which is designated by these resolutions a section of the Lincoln Highway, does rest the patriotic burden of ESTABLISHING, BROADENING, STRAIGHTENING, MAINTAINING, AND BEAUTIFYING such Highway to the end that it may become an

appropriate memorial to the Great Martyred Patriot whose name it bears, and

WHEREAS

Our chief step toward the desired goal is to crystallize in the public mind the practical wisdom of the route selected; therefore, be it recorded here:

First—That in general it has been for nearly a century and is today the main Overland Trail, and that part lying west of Chicago is known by that historic name.

Second—It is the most direct and most practical route as to grades, curves and general topography.

Third—It is to the greatest extent improved and marked throughout its length.

Fourth—It is capable of being established as a fitting memorial highway at the least cost, and

WHEREAS

It is now proper to declare the results of deliberation and inspection in the hope that the wisdom and care in selection may insure united sentiment, and with the prayer that this record will appeal to the hearts of all patriotic Americans to the end that plans and activities toward construction may go immediately forward; therefore, be it

RESOLVED

That the Lincoln Highway now is and henceforth shall be an existing memorial in tribute to the immortal Abraham Lincoln.

It is worthy of note that not a single one of the original organizers who plotted the route of what has since become the Lincoln Highway and who backed the Proclamation from which the above was quoted, lived on the route promulgated or had business interests along that route. Then as now the Lincoln Highway Association was entirely free from any bias of interest, direct or indirect, in the location of the road west of Salt Lake City or at any point between the Atlantic and Pacific. The Lincoln Highway Association is interested only in the objective which it came into existence to accomplish.

This objective, stated in the Proclamation, has been adhered to undeviatingly for ten years.

Those who founded the Lincoln Highway Association in 1913 and undertook, through the wisdom used in the selection of a route, to put behind that route the force of public approval, which would ultimately result in its construction as a through entity, were faced with an exceedingly difficult and complex problem, for there were then no established lines of transcontinental motor transportation. The need and desirability of such a program, which it was hoped would lead to the ultimate realization of such a great Federal highway transportation system as is now being evolved, was foreseen. Those who foresaw the great possibilities in motor vehicular travel felt that a start should be made to provide for it on broad, basic principles of topography, which it was felt not only then, but for all time, must govern the trend of motor traffic across the continent.

BROAD STUDY MADE TO DETERMINE MOST IMPORTANT ROUTE ACROSS AMERICA

Some of those who later became officials of the Lincoln Highway Association had had, previous to its formation, visions of future vehicular travel which led them, with the instinctive American pioneering spirit, to make expeditions westward seeking through routes to the Pacific Coast.

These expeditions met with many misadventures due to the lack of co-ordinated thru roads and to the crude nature of such trails as existed. By persistent effort and the expenditure of much energy, each succeeding expedition pressed farther west, gaining by experience, in the manner of the pioneers, information as to practicable routes across the country. It became evident that the Sante Fe Trail west from Kansas City and the Overland Trail, now the Lincoln Way, west of Chicago provided the best natural routes to the only practicable and available natural gateways or mountain passes through the Rockies. These passes are, respectively, the Raton Pass in southern Colorado which leads into New Mexico, and the so-called Union Pacific pass in

Wyoming. To reach these passes was in those early days much more of an undertaking than it may now seem and required many trips of investigation and effort. These journeys, however, tended to further crystallize a conception of the best and shortest lines of travel to the West and Southwest until it finally became obvious that the Overland Trail and the Sante Fe Trail would become the main through motor vehicular routes.

So when it seemed the proper time in the history of the development of the motor vehicle to promote the most important through road from Coast to Coast, those who were the instigators of the plan which developed into the Lincoln Highway organization came to discuss the feasibility of such an effort with much of the basic information already in hand. In order to determine which of these two main avenues of the future should be the one upon which was to be concentrated the efforts of a forceful organization to promote its advancement toward practical traveling condition, it was necessary only to compile statistics as to the population which would be served by these two routes, and their correllating western branches.

EFFORT CONCENTRATED ON NEW YORK TO SAN FRANCISCO MAIN LINE

Eventually the tide of travel due to population would be greater on the more northern of these two roads. To some extent also idealism guided the selection of New York and San Francisco as the terminal cities, but weighing all data favorable and unfavorable it was clear that the route which would, in comparatively few years, become the most important main thoroughfare in America, was the more northern route, bisecting the heart of the Union, following through the Union Pacific pass on the line from Chicago to the Coast. The effort of the Lincoln Highway Association was, therefore, concentrated in 1913 upon the crystallization of the northern route into its wisest final location, subject to minor straightening and shortening which would naturally come during the process of future evolution.

The main route from New York to San Francisco having been determined upon as the logical backbone



It was not always possible to make early trips across the continent entirely by motor. No through road west of Pittsburgh in 1913



There was no existing through trail across the West when the Lincoln Highway was laid out in 1913. The motorist used a compass

for an ultimately-to-be-developed American highway transportation system, how was the route to be plotted between the terminals selected? What basic principles guided its selection which, being wise and practicable, apply now as strongly as they did ten years ago?

It was necessary only, with a full knowledge of the general topography between Jersey City and Oakland, to locate the main points of a route most practicable and most directly in line with the terminal cities on the Hudson River and San Francisco Bay. Co-operation to this end was sought with the road officials of those states which, at that early time in road development, had progressed to the stage of having road departments. The objectives of the Association were explained and in every case cordial co-operation was extended.

DETAILED ROUTING BETWEEN COASTS

A few words will suffice to indicate how the route fell naturally into place across the map of the United States, once the problem was formulated and it became clear that what was desired was the shortest and most direct connecting road consistent with topography between New York and San Francisco. Starting from Jersey City and following the natural topography, the route which had been followed from the earliest days, Philadelphia would now be the next point, while the objective to be reached west of Philadelphia, in line with natural topography, was Pittsburgh. Two routes were possible between Philadelphia and Pittsburgh; the natural topography favored the route via Gettysburg rather than that by way of Harrisburg. The strategy of the connection leading south from Gettysburg to the National Capital added to the balance in favor of the Gettysburg routing and it became the choice. Having in view the most direct main route across the State of Ohio from Pittsburgh west, Fort Wayne, Indiana, fell naturally in line with Chicago as the ultimate objective. Topography had little control in the flat country between Pittsburgh and Chicago; the question was only to find the shortest and most direct connecting road.

It was felt that there would develop ultimately a through travel which it was not sensible to send through

the congestion of the Chicago area; therefore, a route was sought which avoided Chicago and expedited through traffic following the natural topography by way of Joliet and joining the old "Overland Trail," leading westward from Chicago, at Geneva. Illinois, a flat country, presented no problems of topography and it was necessary only to determine upon the point of crossing of the Mississippi River to solve the problem of the route between Chicago and the River. The Clinton, Iowa, bridge became the natural objective in following the old Overland Trail. Pursuing the location of route westward from Clinton, Iowa, it was natural to follow the route of earlier pioneers and engineers along the thoroughly established line of main travel to the Omaha crossing of the Missouri River, shortly west of which would be encountered the practically water-level grade across Nebraska along the Platte River, followed by the Union Pacific Railroad.

MOUNTAIN PASSES RESTRICTED CHOICE OF ROUTES

Looking westward from Omaha and viewing the available possibilities of crossing the Rocky Mountains, it was natural to pursue the shortest and most direct line heading for Union Pacific Pass, by way of Cheyenne and then on to Salt Lake City. There was no practicable pass for motor travel within four hundred miles north or south of the Union Pacific Pass west of Cheyenne, and, once through, the line became clear across Wyoming and into Salt Lake City or Ogden.

It was clear that to reach San Francisco it would be necessary to go either north or south of Great Salt Lake. A trail ran from Ogden around north of Great Salt Lake, near the Idaho line, and connected through Reno and Sacramento with San Francisco. Another trail—the one used by the old Overland Stage Coach and the Pony Express riders of an earlier day—led from Salt Lake City south of Great Salt Lake through Ely, Nevada, and by way of Carson City to Sacramento and San Francisco. From Ely, Nevada, there led southwest an even then well recognized trail by way of Tonopah and Big Pine into southern California. The routing

south of Great Salt Lake was the shorter to San Francisco and had the tremendous additional advantage of connecting with the important road to Los Angeles. This routing was urged by the Governors of both Utah and Nevada and was adopted on the same broad basis of topography and traffic strategy as was the balance of the route. The importance of this basic route strategy west of Salt Lake City will be touched upon in more detail later. Another important consideration was that the only available passes in the Sierra Nevadas, to which any route west of Salt Lake City on a line to San Francisco led, were deep with snow and closed to travel approximately eight months of the year; that is to say, for a period much longer than any other section of the route east of the California line. Another outlet was essential then for that traffic desiring to enter California previous to the opening of the pass used by the Southern Pacific Ry. and its companion pass south of Lake Tahoe, where an alternate route was located in the belief that ultimately one or the other would be so constructed as to make possible its maintenance open for traffic earlier and later in the snow season.

From the summit of the Sierras the route was dictated by the topography of the mountains to the main junction point at Sacramento from both passes north and south of Lake Tahoe, and from the State Capital by the only practicable route direct to San Francisco Bay.

INTERESTS OF SECTIONS TRAVERSED NOT A FACTOR

Such then, briefly, was the basic strategy and general broad policy of locating the Lincoln Highway across the map of the United States. It will be seen that the advantage of sections or communities, or the interests of business organizations, which were alive to the ultimate importance of such a through highway routing, had no part in the consideration of those endeavoring to project a strategic backbone highway across the American Continent along lines dictated by the policies above formulated.

But two mistakes in principle were made in the original routing of the Lincoln Highway, both being the

result of strong official urging from sources biased by other considerations than those actuating the Lincoln Highway Association. These mistakes were later corrected, but not before they had almost accomplished an irreparable harm by establishing a precedent contrary to the basic principles upon which the routing of the Lincoln Way was established.

The first of these mistakes lay in the designation of a route branching from the main line of the Lincoln Highway at Big Springs, Nebraska, and running into Denver, Colorado, 100 miles due south of Cheyenne, Wyoming. This deviating "loop" was the result of the strong representations of the then Governor of Colorado, whose interest in the transcontinental project was great and whose desire to see Colorado's Capital included on the route was prompted undoubtedly from an admirable effort to promote the advantage of Colorado. The establishment of a route for any other reason than that of basic efficiency, however desirable from the standpoint of Colorado, was wrong from the standpoint of those who had in hand the great task of selecting a route which would stand because it was right.

The other mistake was made at the urgent request of the then Governor (Spry) of Utah, who, while endorsing fully the route of the highway west of Salt Lake City, urged that it be brought in from Evanston to Ogden and then south to Salt Lake City, instead of the now direct and shortest line through Parleys Canyon into Salt Lake City. The Governor was actuated in his effort by consideration for the interests of Ogden, naturally, and not by the same desire to facilitate through traffic that the Association had in mind. Ogden, like Denver, was necessarily shortly thereafter eliminated from the line of the Lincoln Way, fortunately before urgent requests from high places came for additional diverting, which, if carried to logical conclusions, would have ultimately effected the entire collapse of the plan.

GREAT PRESSURE EARLY EXERTED TO CHANGE ROUTE

The appeals to lengthen the Lincoln Way by devious windings which would take in various points of interest and cities of importance were extremely numerous.

Laterals were urged on every pretext. It will be remembered that this was long before the establishment of any Governmental authority to take in charge this question of correlating interstate highway connections, and that the Association itself had no more power than that given its acts by the wisdom which those directing its efforts could put behind their decisions.

Two urgent requests for changes in the route of the Lincoln Highway, which were contrary to the policies governing its adoption, were of historic importance because of the high sources from which they emanated, and because, in each instance, the Association was able to show the absolute soundness of its position; a position which it is now again endeavoring to establish.

The first request was that of President Wilson that the Lincoln Highway be routed from Philadelphia by way of Washington to Gettysburg, the purpose being only the inclusion of the National Capital in the route. The President, upon the aims of the Association being explained and its basic policy of routing outlined, did not press his request. The second, and still more important request, because of its historic consequences, occurred when a strong effort was made from Marion, Ohio, to bring about a change in the Lincoln Way which would carry the route south through that community, a consummation devoutly to be wished by the alive and wide-awake business men of that community, who determined to gain for their hustling city the advantages by that time known to accrue to cities along the Lincoln Way. Back of their efforts they secured the support and interest of then Senator, Warren G. Harding of Marion.

SENATOR HARDING ENDORSED ASSOCIATION'S POLICIES

We state that this instance was of more importance than the first named, because in this case Senator Harding came to Detroit, at the head of a large committee of his constituents, to urge upon the officials of the Association the change of route desired by his fellow-townsmen. Upon hearing the principles again enunciated, he not only desisted from further efforts to bring about the removal of the Lincoln Highway from its more efficient

line north of Marion, but urged the active business men of his community to cease their efforts, advising them that they were in the wrong and that the Lincoln Highway Association was right in principle.

At the risk of being tedious, Mr. Secretary, we have undertaken to build up for you, in this introduction, a picture of that armor plate of principle with which we sought to surround the Lincoln Memorial Highway; to endeavor to show how absolutely devoid of all considerations of local advantage is the standpoint of this Association, and how clearly that standpoint coincides with the one which is necessarily adopted by yourself when you undertake to judge between the merits of the various routes under discussion in the West.

We have sought to establish for ourselves, before undertaking to discuss the problem at issue, a certain high plane of intent and purpose, which we feel is most necessary before we can hope to impress you with what we have to say, which may be at considerable variance with other pictures of the situation presented to you with the very best intentions of even-handed justice, but which must necessarily carry some color of bias due to interests vitally affected.

THE ASSOCIATION'S DISINTERESTED POSITION

We wish to establish that we have no interests to be affected by your decision in connection with this western route controversy, one way or the other. It may be maintained that we have a biased interest in considering the problem now, which we did not have in 1913, because of our financial investment in the improvement of one of the routes under consideration in the problem now before you. The possibility of this bias, however, we wish you would disregard, as we expect to present separately and entirely aside from the basic arguments of policy and route strategy, our suggestion as to the conservation of our financial interests in one of the routes, should, for any reason, the picture we are about to present on an entirely unbiased basis prove to be unconvincing, and a decision returned favorable to a route upon which our funds are not invested. We present a

Brief for the route of the Lincoln Way solely because we are convinced that it is right.

The basic principles upon which the Lincoln Way was laid out, and to which, with such difficulty and care, the Association has adhered for ten years, are the same principles which will govern the picture of the road situation west of Salt Lake City we propose to present to you. This picture has not changed since 1913.

THE DEVELOPMENT OF THE ROUTE

We have, as briefly as possible, indicated how the Lincoln Way came into being, and wish now to indicate how its improvement rapidly developed and early proved a dollars-and-cents value to the communities traversed, which brought about an increasingly ardent effort in many states to divert it from its originally selected course to one more profitable to the local interests seeking to divert it.

Following the proclamation of the Highway began the long grind in the way of securing public interest and official attention, the concentration of funds and the gradual co-ordinating of the local roads, and the re-locations too numerous to mention which, in detail, gradually brought toward a reality a connecting highway between the two coasts, where had been but a line on the map.

RAPID PROGRESS IN CONSTRUCTION

Some localities and even entire states were aggressive to a high degree, being early imbued with the importance of the undertaking. The press of the nation saw the great value of this main-line, backbone highway, and the object lesson it taught, and early opened its columns to a full consideration of the road's necessity, advantages and purpose. Courageous tourists embarked on the novel motor car journey overland under conditions of travel none too good. Year by year this travel increased, while road conditions improved astonishingly, forcing a betterment of accommodations for the constantly increasing number of travelers, whose business began to be a material factor in the communities along the route. The road became of maximum importance

throughout its entire length; the Lincoln Highway became an entity between the two coasts, and gradually with national approval came to be looked upon as "The Main Street of the Nation." This rapid progress toward establishment would have been impossible if, in the main, the location of the route had not been fixed by governing basic principles originally carefully observed and obvious to all as right and just.

INCREASING TRAVEL IMPRESSED VALUE OF ROUTE AS LOCAL ASSET

As a fixed main artery across the nation, the Lincoln Way became in the East and Middle West the inter-connecting road to everywhere! In the West it became the main-line route to the National Parks, and to the Pacific Coast as a whole, through that vast region south of the Columbia and north of the Colorado Rivers. The unusual travel the route began to receive, the unusual amount of improvement concentrated upon it, and the exceedingly unusual amount of public attention directed toward it as a result of continuous effective national publicity, increased the efforts to divert its course for local or sectional profit. What had been agreed upon unanimously by all states traversed became gradually a question for controversy in some.

CHAPTER II

THE ROUTE SITUATION IN UTAH

WITH an understanding of the national picture of the situation as it has presented itself in general to the Lincoln Highway Association, and after considering the actuating purposes and principles of the organization which directed and promoted the Lincoln Highway route, which, in every state save one, has been finally selected as a portion of the Federal highway system and has received the most active co-operation from successive administrations for ten years, we should point out why, in our opinion, a special situation has developed in Utah requiring the particular consideration of your Department and an unusually intensive study to bring out the facts.

WHY A ROUTE "CONTROVERSY" IN UTAH?

Why a controversy in Utah, when in every other state between the two coasts the Lincoln Way route is cordially endorsed? Why a controversy as to the route in Utah in 1922 and 1923 when the route in Utah, as in every other state, had been cordially endorsed by the State of Utah from 1913 to 1921?

Among other matters, we feel it our particular duty to provide you with information on this point, which is one of those important considerations which do not naturally fall to engineers to investigate.

CONFUSING DIFFERENCES OF OPINION NOW

The Lincoln Highway "controversy," as the discussion of the location of the road west of Salt Lake City has been denominated, is the result of an effort to reconcile differences of opinion by argument. Not differences of opinion alone between the State of Utah or its Road Department and the Lincoln Highway Associa-

tion, but differences of opinion between the States of Utah and Nevada; differences of opinion between the present administration of the State of Utah and the two preceding administrations; differences of opinion between the State Highway Department of Utah and the County Commissioners of Tooele County, Utah; and differences between the existing State Highway Commission and previous State Highway Commissions.

With such a confusing series of differences; when even those presumed to be in the same camp differ diametrically with the passing of time, it is not surprising that the "controversy" should have become complicated to a degree which in the West, because of feeling aroused, no longer permits of clear presentment of the original problem and basis of difference.

ROUTE MET WITH OFFICIAL APPROVAL TO 1921

You will understand, Mr. Secretary, that the petty controversies developed incidental to the establishment of a route west of Salt Lake City, as everywhere else along the Lincoln Way, failed of official sanction previous to 1921. Even then sectional interests in Utah had been a year in overcoming the present administration's originally friendly attitude. Up to 1921 the State Highway Departments and the Governors of Utah had been in full agreement with the Association's findings as to the route to be improved in western Utah.

There has been so much said by the present Utah administration in regard to this Association's alleged efforts to dictate to the state a route which the state does not and never has wished, that perhaps it would be well here to show finally that there is no basis whatsoever for any charge of attempted dictation on the part of this organization—to show that the controversy is of very recent origin, developing, in fact, since January 1st, 1921.

That the Lincoln Highway Association has ever attempted to arbitrarily dictate the route in Utah, contrary to the wishes of the state, is no more true than would be the same statement in regard to the route in any of the other ten states through which it passes and wherein the utmost degree of co-operation, as has been

shown, has for ten years been the rule between the Association and the state governments under varying administrations.

HISTORY OF THE LINCOLN WAY ROUTE IN UTAH

In August, 1913, the results of long route investigation across the continent were laid before the Governors of the states traversed at a conference held at Colorado Springs, Colorado. The tentative route of the Lincoln Way was submitted in map form. Governor William Spry, of Utah, and Governor Tasker L. Oddie, of Nevada, were present, along with Governors of other states crossed by the proposed Lincoln Highway and participated in the general discussion of routing which took place.

Governor Oddie of Nevada approved and endorsed the route across his state as a wise one and stated that it would soon be declared a State Highway.

GOVERNOR SPRY'S WISHES FOLLOWED

Governor Spry suggested, after the meeting, the desirability of entering Utah via Echo and Weber Canyons and running into Ogden and south to Salt Lake City, rather than the shorter route at present followed through Parleys Canyon direct to Salt Lake City. In other words, the only objection he voiced to the original route selected had to do with the section east of Salt Lake City and, in accordance with his request, the Lincoln Highway was routed into Ogden and south to Salt Lake City. No dictation there by the Association! He approved of the route west of Salt Lake City.

Note the following wire addressed to the Association, on September 13, 1913, by the Governor, one month after the Colorado Springs meeting:

"In view of decision announced at Colorado Springs that Lincoln Highway will not be constructed via Price, I urge the building of the Highway through Utah via Echo and Weber Canyons, Ogden, Salt Lake City, Tooele and Ibapah, and will be glad to co-operate so far as possible to that end."

"William Spry."

In a long letter to Governor William Spry, on the same date his wire was received, Henry B. Joy, then President of the Lincoln Highway Association, accepted the Governor's recommendation and the Highway was routed via Ogden, subject to minor shortenings which might be possible upon more elaborate investigation. Years later it was changed back to the more direct route originally selected east of Salt Lake City.

CAREFUL STUDY GIVEN ALL POSSIBLE UTAH ROUTES

The problem in Utah and Nevada was a difficult one from a physical and financial point of view. The Association set about to cope with it and its officials traveled every route possible, conferred with every individual and organization, in those states, familiar with the country in an endeavor to see if the difficulties could not be made easier.

In Nevada, matters progressed naturally—straightenings and betterments occurred as time passed. In Utah matters waited. Every area was inspected and surveyed by officials of the Association many times, at a cost of thousands of dollars, profiles were taken and the routes were given careful study at various times of the year, including mid-winter. Years went by and finally in the spring of 1918 ideas crystallized and a shortened route seemed possible of immediate completion by Utah, if the Association could extend financial aid. At that time Federal aid was totally inadequate and it was realized that other outside assistance was essential if a route were to be improved across the desert waste in Tooele County.

A route had been pointed out by residents of that county which saved some fifty miles, providing a mountain pass could be opened in addition to the "desert bridge" required. This route, which accorded with Governor Spry's original recommendation, after a long investigation, was agreed upon by everyone as the final and only wise route to be constructed as a link in the road from Salt Lake City into California.

GOVERNOR BAMBERGER FAVORED LINCOLN WAY

In 1918 the Honorable Simon Bamberger was Governor of Utah, and the final negotiations of the Associa-

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Saltlake Utah Sep 13-13

Lincoln Highway Assn,

Detroit-

In view of decision announced at coloradosprings that lincoln highway will not be constructed via Price I urge the building of the highway through Utah via Echo Weber canyon Ogden Saltlake Tooele , and Iba-tah and will be glad to cooperate as far as possible to that end.

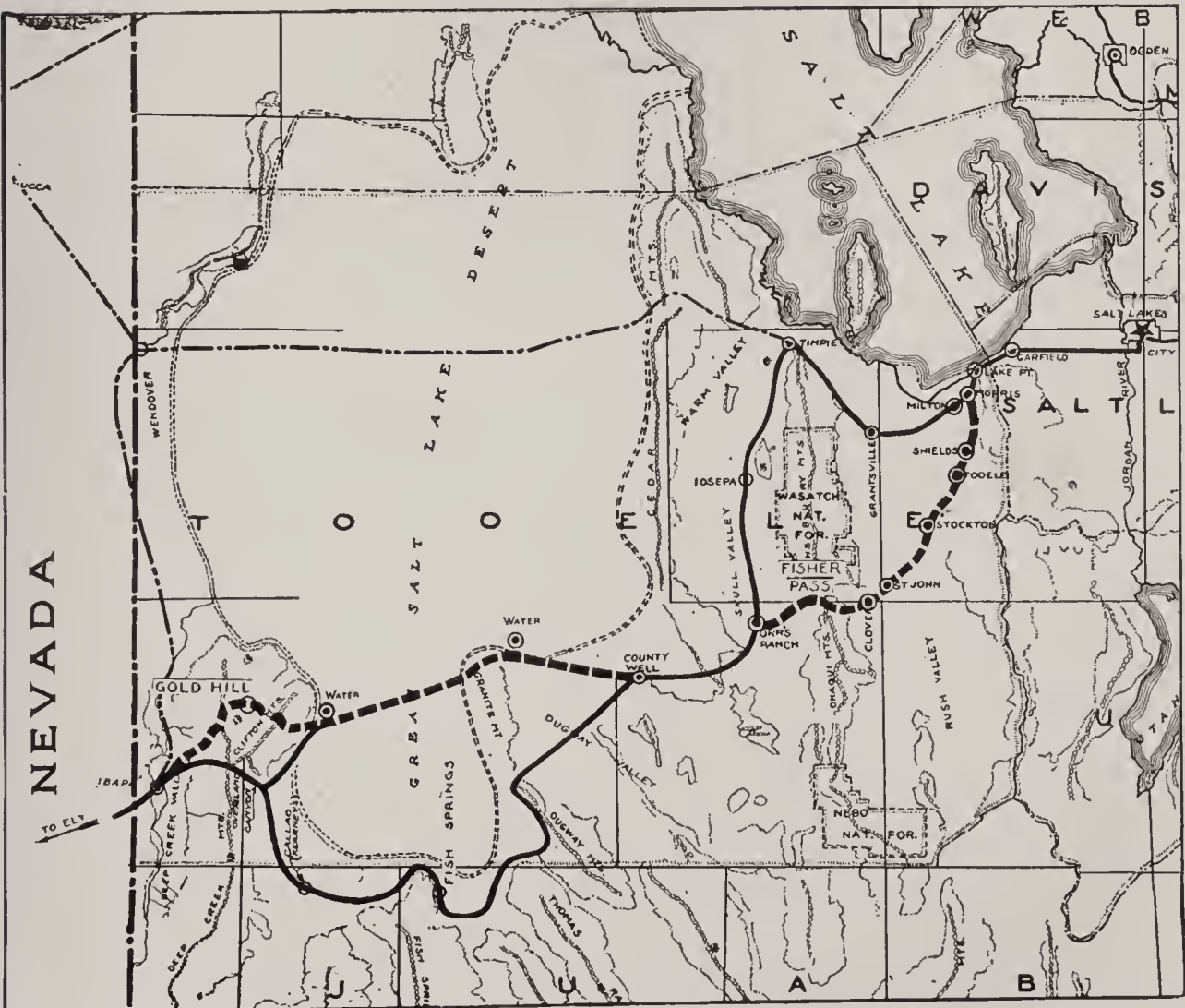
Governor Wm Spry.

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Governor Spry's message of September 13, 1913, urging the present route of the Lincoln Way west of Salt Lake City



Western Utah, showing the old Lincoln Way and the present route via Rush Valley, Fisher Pass and the Goodyear Cut-off

tion in connection with the route to be improved were with him. At that time the Governor was ex-officio head of the Road Commission which was not then appointed, but by law consisted, in addition to the Governor as Chairman, of the Secretary of State, the Attorney General, the State Auditor and the State Engineer. The Commission could not act without the approval of its Chairman, the Governor, of course.

UTAH ROAD COMMISSION AGREED ON WISDOM OF ROUTE FINALLY SELECTED

Let us see how the Utah State Road Commission, comprising the highest governing officials of the state in 1918, referred to the route of the Lincoln Highway in its unanimously adopted resolution of March 21st, 1918, which now forms a part of the records of the Utah State Highway Commission. Here is how it spoke of the route which the state officials now endeavor to indicate is arbitrarily, dictatorily and with sinister determination to infringe upon the state's rights, put forward by the Lincoln Highway Association:

"WHEREAS, It is agreed that in constructing these two necessary links in the route selected, and thereby eliminating some fifty miles of the worst road conditions now existing on the transcontinental highway, the Utah State Road Commission will accomplish a work of the greatest benefit, not only to the State of Utah, but to the United States, in linking this great, national, strategic highway, with its resources and its people, to the states on the east and west and to the Atlantic and Pacific Coasts, thereby complying with the recommendations of the Council of National Defense, in bringing the Utah section of the Lincoln Highway into proper condition, and

"WHEREAS, We see in this construction, now more than ever before, the keystone of the Lincoln Highway arch, the most necessary step to be taken to provide a through route of an American highway transportation system, and

"WHEREAS, Through our patriotic desire and support we believe that this construction will provide

the only immediate opportunity for the Lincoln Highway Association and the State Road Commission of Utah to co-operate in achieving a result of vast national importance, and

“WHEREAS, The State Road Commission of Utah is willing to accept the money tendered, in consideration of the fact that the said State Road Commission shall be allowed to make the construction requested and required and in full compliance with the general road policy of the State of Utah,

“NOW, THEREFORE, BE IT RESOLVED, etc.:”

The emphasis we have inserted merely to impress the more pertinent references which stress the co-operation between the Association and the State of Utah, the need for the construction and the fact that the state itself would do the work—a work which was “in full compliance with the general road policy of the state.”

It is unnecessary to go further and quote here those sections of this same resolution which solemnly agree to accomplish certain things in consideration of \$125,000.00 cash, paid to the State of Utah by the Lincoln Highway Association. The full resolution will be found in Appendix “A.” The point here is merely to clearly show that there has been no question of dictation or of an effort to force upon the state a route selected by the Association as against one selected by the State Highway Department.

The fact is, the present route of the Lincoln Highway in Utah was wisely and with very deliberate consideration selected by Utah and by the Lincoln Highway Association after five years of investigation and discussion as to the best route, the route to be improved, and the one upon which joint funds would be expended. Utah spent some \$60,000.00 to \$80,000.00 of its own funds on the Lincoln Way desert crossing before it was forced to abandon the work in 1919 due to lack of funds and not to any change of policy; which was indicated by the Governor’s urgent appeal to Mr. Seiberling for more funds to enable completion of the work.

NO "DICTATION" OF ROUTE EVER ATTEMPTED

We trust that we have demonstrated that the point of the "controversy" has nothing whatever to do with any question of imposing an outside will upon the State of Utah in the matter of route selection. The fact is, the controversy has entirely turned upon the point as to whether or not the subsequent administration of the state would carry out the plan so wisely and unanimously agreed upon in 1918, or whether it should completely reverse the state's position and, disregarding all of its agreements, its expenditures and its past accomplishments, turn from one-half completed road to another in still worse condition and endeavor to bring it to completion, while all through traffic headed for the west coast waited years for **any** half-way satisfactory roadbed across the Great Salt Lake Desert.

We trust we have also demonstrated that both Governor Spry and Governor Bamberger approved the Lincoln Highway west of Salt Lake City.

WHY HAS THE ATTITUDE OF UTAH CHANGED?

Why a difference of opinion now, since a new administration has taken over the reins of government in Utah?

The problem of today is exactly the problem of ten years ago. We have more light on it now, that is the only difference. The conditions are the same. The topography of Utah, Nevada, and California remains unchanged. The viewpoint of the Lincoln Highway Association remains unchanged in spite of the vast amount of additional data it has developed. The only change lies in the attitude of the State of Utah. Let us see if we cannot disclose the reasons for this change of attitude on the part of this state which, once found, will establish the reason for the "controversy" and aid materially in determining the proper solution of the problem.

THE BUSINESS IMPORTANCE OF TOURIST TRAVEL

Much agitation in connection with the "controversy" under discussion has emanated from California. This agitation, which concerns itself with what route travel

across Utah and Nevada should follow long before it reaches the California line, indicates the importance of that travel as related in some manner to California, even though the routes under consideration might become one before the California line was reached.

The strategy of the road situation west of Salt Lake City largely affects those areas now beginning to fully appreciate the present and potential value of motor tourist business. The Automobile Club of Southern California, at Los Angeles, estimated that visiting motorists spent \$43,575,000.00 in the southern half of California in 1922. The Denver Tourist Bureau and the Colorado State Highway Commission estimated that tourists spent \$40,000,000.00 in Colorado in 1922. The Utah State Automobile Association headquarters at Salt Lake City, estimated that \$3,000,000.00 was spent in Utah by motorists from out of the state last year. With these typical estimates from the western states area in mind, the importance of the possible routing of the main streams of tourist travel through certain sections of the West can be easily understood. That the interests of sections bidding for tourists' business—the same business—should be opposed, is only natural. That those sections having natural attractions for tourist traffic should exploit these attractions to the greatest degree possible, is also natural. The rival attractions of various sections of the West will from now on be advertised and brought to the attention of the motor traveling public perennially, and this competition will also serve to benefit the West as a whole.

VAST AREAS AFFECTED BY ROUTES BUILT

Now, however, this sectional competition for tourist business and dollars, instead of confining itself entirely to the exploitation of natural advantages, has, to some extent, concerned itself with the strategic advantage to be gained through the construction or non-construction of highways leading through certain areas. The vast distances to be traversed by highways in the West, together with the relatively meager road funds, naturally make possible the first opening of but one road between any two important main points. Which will be selected to be

opened first with the funds available is, therefore, a very vital question to large areas west of the Rockies; a question which can well mean hundreds of millions of dollars in new money, as well as a very large "head start" in development and settlement, before the gradual completion of a general system of highways puts all sections on a relatively equal basis to bid for the tourist traffic. The time element is now a very important one. The strategy of this western road situation now **all** revolves around the development of the road west of Salt Lake City.

SALT LAKE IS GATEWAY TO MOST OF PACIFIC COAST

Into Salt Lake City must flow all traffic, headed for a thousand miles of the Pacific Coast north of the Mexican border, traversing the central belt across the United States and crossing the West north of the Mohave Desert and south of the Cascades.

A route widely known as The Yellowstone Trail from Chicago, via Milwaukee, Minneapolis and Aberdeen through Montana and across northern Idaho into Seattle or Portland, via Pendleton and Spokane, well serves the Pacific Northwest and tourists can get through on this route during the summer months.

The southern route, known as the National Old Trail, from Kansas City via Trinidad, Colo., Albuquerque, N. M., Flagstaff, Ariz., and Needles, Calif., into Los Angeles via Barstow, is the winter route and, in fact, can be utilized most of the year by travel heading for southern California, although during the summer months the journey through 400 miles of the Mohave Desert on this route is almost a test of endurance against the torrid heat.

LINCOLN WAY CARRIES GREATEST TRAFFIC WEST

The central route is the Lincoln Highway leading into Salt Lake City. It leads most directly on into central California, is improved to a very satisfactory condition for 2,450 miles between New York City and Salt Lake City and carries by far the greater bulk of traffic across the continent. Official estimates compiled by the Utah State Automobile Association at Salt Lake City, during 1922, indicated that 23,260 motorists arrived there from the east, 71% of this total coming in over the Lincoln Highway. The traffic which comes in from the east over

other routes does so in a roundabout way, arriving in Salt Lake City from the north, for example, by coming down from Yellowstone Park or arriving there from Denver after traversing the 11,306-foot summit of Berthoud Pass or the 10,430-foot summit of Tennessee Pass in the highly scenic region of Colorado.

This traffic reaching Salt Lake City, unlike the traffic on The Yellowstone Trail or the National Old Trail mentioned, can at that point divert and, without materially lengthening the journey to the Pacific Northwest or to southern California over either of the other routes, reach those regions via connecting roads. At Salt Lake City, traffic can turn north to Pocatello, Idaho, and go via Boise to Walla Walla. Or this traffic can at Salt Lake City turn south and follow the "Arrowhead Trail" through Provo and Beaver, Utah, to St. George and via Las Vegas, Nevada, strike the National Old Trail at or near Goffs, Calif., then going into Los Angeles.

GREAT SALT LAKE DESERT THE CONTROLLING FACTOR

Confronting the travel which reaches Salt Lake City bound for any point on the Pacific Coast north of Los Angeles or south of Portland lies the Great Salt Lake Desert. This must be crossed by travel desiring to reach central California most directly. It extends for 150 miles north and south and Salt Lake City is situated directly east of its center. This desert is a great natural barrier to travel of any kind—foot, horseback, wagon, motor or rail. The existence or absence of roads across it controls the destination of a great volume of west-bound traffic. The condition of the road across this desert may thus become basically the cause of loss or gain to large areas, into which travel may be diverted or from which it can be restrained from entering, by the degree of passability of the "desert bridge."

The failure on the part of the State of Utah to provide any satisfactory road across this desert has necessarily had its beneficial effect upon both southern Utah and southern California. By the same token the artificial closing of a road west of Salt Lake City, and the necessary diversion of all traffic through central and southern Utah into southern California, operates to the very great disadvantage of northern California.

SECTIONAL INTERESTS INVOLVED

Northern California naturally, therefore, strongly urges upon Utah the opening of a road west across the Great Salt Lake Desert. But she is very particular about where the travel is going to cross this desert. Northern California's interests lie in having the desert crossing so located that once tourists embark on the journey over that crossing they not only can get to northern California, but they cannot get to southern California. Northern California, therefore, at the risk of delaying the improvement of any road west across the desert from Salt Lake City, has for several years actively agitated for the construction of a road across the desert which would not permit a connection with Ely, Nevada, where through traffic would have an opportunity to divert for southern California, if it so desired, even after leaving Salt Lake City.

Northern and central Nevada have obvious interest in this question. Central Nevada and the territory north of Las Vegas and south of Tonopah have urged upon the State of Utah the construction of a link from Salt Lake City to Ely, as that improvement would send the flow of west-bound traffic either through central Nevada or through that belt traversed by the road known as The Midland Trail, from Ely southwest into California, via Tonopah. Northern Nevada has been equally interested in an endeavor to persuade Utah to build a link connecting Salt Lake City with Wells, Nev., which would send the flood of through traffic through the communities along the Southern Pacific Railroad.

CONFLICTING DESIRES OF SECTIONS HAVE DELAYED ROAD IMPROVEMENT

With this brief picture of the sectional interests above mentioned presenting their conflicting desires to the State of Utah and wrangling over their unsuspecting tourist victims of many years to come, we can leave this situation. It has been touched upon here only to present to you the reason for the "controversy." We doubt if anywhere else in the United States there exists a road situation so strategic that a short link in one state may

mean, through its construction or abandonment, so many millions of dollars of future business to other areas hundreds of miles away. Having presented a picture of these conflicting interests which, only since the development of large and profitable volumes of through travel, have affected the situation through their disputes, we can leave it. These conflicting interests have already accomplished several years of delay which is now "spilt milk." Before leaving this subject, however, we can point out that co-operation between these conflicting interests is impracticable and beyond expectation, although the completion of the Lincoln Highway as originally laid out would give all the various competing areas greater returns from the visiting tourists than any of them now get or ever would get through the carrying out of a policy designed to provide special consideration for a favored area at the expense of other areas and to the detriment of a majority of the tourist travel.

UTAH FRANKLY STATES: NO NEED FOR DESERT ROAD

It should be noted in passing that there is not a western area involved in this "controversy" which can press its argument in this matter without acknowledged bias. This particularly applies to Utah, which, in fact, readily admits its strong desire to develop the central and southern sections of the state by forcing through them the flow of tourist traffic, which, should an adequate road be opened up west of Salt Lake City, could pass through the state quickly en route to California. See Appendix (G).

WHERE DOES THE TRAFFIC WANT TO GO?

We have touched upon the volume of travel which, even in 1922, with extremely unsatisfactory road conditions west of Salt Lake City, reached that point from the east headed for the Coast. A consideration of the first construction of one road west of Salt Lake City should be preceded, we believe, by a consideration of where the large majority of this traffic wishes to go. We hold this to be self-evident; that a road should be built to serve the travel rather than that the travel should be forced to follow a road.

The records kept in Salt Lake City, which community is keenly alive to the value of tourist traffic and has for years been stimulating it and lending it such services as were possible through the dissemination of free information at a Bureau where records have been kept, indicate that over 90% of the west-bound traffic reaching the Utah Capital is headed for California. See table p. 52 and Appendix (H).

The most careful estimates made in Salt Lake City, Ely, Nev., St. George, Utah, and Los Angeles, indicate that at the lowest estimate more than half of the travel reaching Salt Lake City from the east is headed for southern California.

None of the facts, so essential to the picture, so far established have had anything in common with engineering investigation. After having endeavored to show our own disinterestedness and prove the obvious self-interest which has developed the "controversy" and after having presented with some care the basic principles which have actuated our investigation for ten years, we can now proceed to state "the Problem" as we see it and undertake a consideration of it along lines somewhat similar to those followed by your engineers in consideration of the problem they undertook to solve.

CHAPTER III

WHAT IS THE PROBLEM?

PERHAPS what we have so far stated may indicate why the statement of the real problem to be solved by your decision is not so simple as may at first seem to be the case. "The Problem" involves many major considerations, omitted entirely, and no doubt properly, from consideration in the report of your engineers. In fact, there is not one problem to be solved, but several, among which is the problem of determining what considerations will govern the selection of the route first to be improved with government aid west of Salt Lake City. It will be noted that we said "first." The time element is a very important one in this matter and an element which in the engineering report is entirely disregarded.

IMPORTANCE OF DETERMINING TRUE PROBLEM

At this juncture, in presenting to you the most important matter of all, i. e., "the Problem" which will be considered and which we feel is the true problem to be set before you for settlement, we must strengthen our position by making clear to you why we believe the problem set to be solved by your engineers is an incorrect statement of the real problem and why, therefore, proceeding from a mistaken premise, it was possible to develop, particularly while disregarding many aspects of the situation, a report which reaches conclusions diametrically opposed to those we will reach by the use of much the same data. At only a few points will we take issue with the report and then only when we feel it absolutely essential because of wide variations in data or in method of approaching points at issue.

YOUR ENGINEERS' STATEMENT OF THE PROBLEM

The problem which the engineers of the Bureau of Public Roads set themselves to solve, or which they were

given to solve, is stated to be: "To determine which of two main routes connecting Main Forks, Utah, with Wadsworth, Nevada, is to be named as the primary Federal aid route and which as the secondary. To know whether or not the total length of 7% Federal aid mileage mentioned may be reduced by making any portion of highway, especially the section crossing the Great Salt Lake Desert, common to both routes. If found advisable and practical to have a unit common to both north and south highways, then where should that common route lie?" It is added that a part of the work of the investigators is to recommend a practicable routing for the entire length of both highways across western Utah, and Nevada.

We submit that the first part of that "problem" is a question which is largely immaterial. It makes not an iota of difference to anyone in Utah or Nevada or anywhere else as to which of the two routes between the points named, or which of any other two routes, is ordained as "primary" or which as "secondary" highway under the technical meaning of these terms conveyed by the Federal Highway Act.

NO REAL IMPORTANCE IN TECHNICAL DESIGNATIONS

Such elaborate investigation would never have been required to merely answer the question as to which of two main roads should be named "primary" and which "secondary." You are familiar with the types of road largely constructed in the West; types which are built identically on either "primary" or "secondary" roads. The point we are making is that no one interested in the controversy regarding routing west of Salt Lake City cares which road is "primary" and which is "secondary." The only point involved is whether or not both roads shall be on the Federal aid systems of Utah and Nevada and, if it is worth while for them both to be on the systems, which should be opened **first**. Again we say that your engineers' statement of the problem disregards the time element which is one of the most important elements of the problem as we shall shortly state it.

In selecting Main Forks, Utah, as the eastern terminal of the problem, your engineers were correct. It is

at Main Forks that the roads divide, not to again meet (if the shortest route is to be followed) until Sacramento, Calif., is reached. But the selection of Wadsworth, Nevada, as the western limit to the problem, it becomes obvious, is purely arbitrary. Wadsworth is not the western end of the problem at all, if the idea is to select the eastern and western limits of two roughly paralleling routes between Salt Lake City and central California and to compare their length, population, rise and fall, etc., etc.

COMPARISON OF POSSIBLE ROADS TO RENO NEEDLESS

We do not admit that such a comparison of two paralleling routes of travel, each beginning and ending at the same point, necessarily establishes which road should be built, or even which road should be built first. But we are making clear here that even should such a comparison of the two main routes be decided upon as a means of determining which should be built, or built first, the proper terminals are not selected. Why? Here allow us to refer you to a map affixed to the inside back cover of this Brief.

It will be noted from this map that the route referred to in the engineering report as the "Northern Route" leaves the Lincoln Highway at Main Forks, Utah; that the two routes traverse Nevada at a distance of approximately 100 miles apart and, for the traveler whose western objective is Reno, join again at Wadsworth. However, there is no reason whatsoever for assuming Reno to be the western terminus or objective of the travel leaving Salt Lake City. It is not. The objective of the travel leaving Salt Lake City for the west is California, and, if we propose to compare relative distances, grades, etc., between two routes to California, we have no reason to penalize one route and present an undue advantage to the other by selecting a western terminus for both which one route need not traverse at all.

It will be noted from the map that, while one branch of the Lincoln Highway leads from Fallon, Nevada, to Reno and north of Lake Tahoe by way of Truckee into Sacramento, which might be called "the Crossroads of



A view of the excellent concrete Lincoln Highway constructed by the State of Utah west of Salt Lake City and east of Main Forks



Tourists on the newly completed Goodyear Cut-off across the Great Salt Lake Desert in 1919. Note the height of the grade

California," another branch leaves Fallon, Nevada (32.6 miles east of Wadsworth) and runs directly into the State Capital at Carson City (30 miles south of Reno) and thence over the Sierras south of Lake Tahoe and into Sacramento by way of Placerville, the old route of the pioneers.

SACRAMENTO TRUE WESTERN TERMINUS OF PROBLEM

Sacramento is the point in central California to which, from far and wide, comes all of the traffic from California which will follow the central route eastward to Salt Lake City. It is for the same reason the diversion point in California for that traffic reaching the state over any road from Salt Lake City west and headed for either San Francisco, Los Angeles or Portland. By any or every process of reasoning Sacramento becomes the west terminus of any problem which is to be considered by the system followed by your engineers.

We do not consider this misplacing of the western end of the problem to be of very vital importance, for even if the problem were stated as follows it would be incorrect: "To determine which of two main routes connecting Main Forks, Utah, with Sacramento, Calif., should be named as the primary Federal aid route, and which as the secondary." For, as we before stated, it makes no particular difference which road is "primary" and which is "secondary." That is not the point.

The placing of the western terminal of your engineers' problem correctly at Sacramento, however, would, as you can quickly see, vitally affect practically every consideration in connection with which your engineers have elaborately collected comparative data. The moving of the western end of the problem another 180 miles farther west and onto the far side of the Sierra Nevada range does some complicated things to the charts of costs, distances, rise and fall, etc., etc., supplied in your engineers' report.

However, all of this is more or less immaterial as these tables of distance, cost, rise and fall, valuation and population, etc., are not the controlling factors in the decision to be reached anyhow. In fact, they have only

a minor bearing on the question which is a much broader one of general basic policy and route strategy, infinitely more complex than the problem your engineers' system undertakes to solve and made even more complex than it naturally would be, by the many divergent interests deliberately endeavoring to befog the issue.

We must also take exception to that section of the engineers' statement of the problem devoted to the possibility of saving mileage on the Federal aid system. The aim should be to find the road first needed to serve the greatest part of the traffic, not to discover where mileage can be omitted from the system at the expense of traffic service.

THE PROBLEM AS THE ASSOCIATION SEES IT

Let us now try and formulate what we believe to be the problem, or problems, before you.

Before stating the problem, it is necessary to state the assumptions upon which it is based.

OUR BASIC ASSUMPTIONS

We base our statement of the problem on the following assumptions:

First—That serving the best interests of the through traffic is the determining factor. It is admitted by everyone, including your engineers, that the local traffic on any of the routes involved is so light as to be of almost no consequence. If only the local traffic was to have been considered this problem would not have developed. It is the great through flow of "foreign cars" which deserves the greater consideration.

Second—That the time element is of primary importance. By this we mean that theoretical estimates of what can be brought about in fifteen years or so has small bearing on the immediate problem, in view of the very urgent demand for a connecting through highway **now** and the vast volume of waiting traffic.

Third—That two roads will be built across Nevada anyhow and promptly. This is assumed also by the engineering report which shows that the road from Wells to Wadsworth and the road from Ely to Wadsworth will be built, regardless of which is established as a "pri-

mary" road. The engineering report also makes no discrimination as to the way in which the two roads will be improved. They will both certainly be built by the state with Federal aid, to a standard adequate to take care of the traffic now foreseen.

We do not believe that any of the above assumptions are unreasonable and, later, after taking up a consideration of the problem, we will show why they are reasonable and sound. These assumptions permit of the following possible definition of the problem:

THE TRUE PROBLEM DEFINED

"What road between Main Forks, Utah, and Sacramento, Calif., is it the more important to open first for the through traffic, i. e., which road serves best the majority of through traffic headed west from Salt Lake City, whether headed for central or southern California, and which route can be more quickly put into practicable travelable condition? If the Southern Route through Ely is shown to be the route of first importance to serve the greatest volume of traffic, which route to Ely can be first and more economically opened for tourist travel, that by way of Ibapah or that by way of Wendover?"

We contend and believe it is self-evident that it is much more important to determine upon a road which will best serve the majority of all traffic headed west from Salt Lake City than it is to determine upon a road to Reno.

Let us briefly contrast the assumptions upon which our problem is based and the assumptions upon which the problem your engineers undertook to solve is based.

CONTRASTING ASSUMPTIONS

The problem your engineers endeavor to solve is obviously based on the following assumptions:

First—That the important thing is to determine the shortest, easiest, cheapest and most direct ultimate road to Reno from Salt Lake City.

Second—That time or money does not enter into the problem, the point being: which road to Reno can, with all the money necessary to build it properly and completely and with all future time to accomplish it in, re-

sult in the expenditure of the least millions of dollars and the ultimate establishment of a road which can be traversed most quickly and at lowest cost.

Third—That central Nevada requires no immediate road connection with Salt Lake City and, anyhow, it is more important to save Federal aid road mileage in Utah than in Nevada.

The assumptions upon which our statement of the problem is based have been given. It is sufficient to state here only that we do not agree with any of the three assumptions upon which your engineers stated the problem. We maintain that it is not particularly important to discover the best road to Reno from Salt Lake City, or the shortest, or the least expensive. We maintain that reaching Reno is not germane to the problem; that not one tourist in a hundred driving west from Salt Lake City is heading particularly for Reno. This tourist traffic is headed for **California** and, as we have previously shown, more than half of it is headed for southern California. Reno does not enter into the problem, nor does Wadsworth. Those points are merely possible way-stations on the line of a possible route to one of the two great Pacific Coast objectives.

TIME AND MONEY ARE IMPORTANT FACTORS

It is interesting to speculate upon what can be accomplished in the way of constructing a finished road from Salt Lake City to Reno at some indefinite date in the future, assuming unlimited funds for the purpose, but we respectfully submit that the assumption of unlimited funds and indeterminate time for accomplishment is fallacious and in itself deposes the practicability of any conclusion based on such a premise.

We further submit that not only is there no reason for seeking to save Utah mileage of road construction at the expense of additional unneeded road mileage in Nevada, but, if anything, it would be more fair to the states and more economical to the Government to save road mileage in Nevada at the expense of Utah. The Federal government pays a much larger percentage of the cost of the construction of each mile of road in Nevada

than it does in Utah. Also Utah with an area of 85,000 square miles has a population of 450,000, while Nevada, with an area of 110,000 square miles, has a population of but 77,000. This, of course, is not a material factor; we cite it merely as an indication that at least the two states should be considered equally and no attempt made to conserve Federal aid mileage in Utah while adding to the necessary Federal aid system of Nevada.

No doubt it was not possible for your engineers to adopt the assumptions upon which we found our statement of the problem, any more than it was possible for them to take into consideration broad questions of route strategy and of general basic policy in preparing their data. We realize that engineers are given engineering problems to solve and are not expected to concern themselves with matters outside of the limits of the engineering field. We wish to point out, however, how fallacious is a conclusion and a recommendation, based upon a consideration, no matter how detailed, of a problem incorrectly stated and even then considered from but a few of its many important aspects.

WHAT WE PROPOSE TO PROVE

We propose to show conclusively, not only that the problem is as we have stated it, but that the sound, clear facts of the case result in a solution of the problem diametrically opposed to the recommendation of your engineers. As we have pointed out, this difference in conclusion is largely due to different assumptions and a different basic premise and not largely from any difference or disagreement in regard to the statistical facts presented in the report. However, we will find it necessary from time to time to point out what we believe to be inaccuracies in the facts stated in the report of your engineers and also, unfortunately, from time to time to direct attention to certain indications of an unconscious bias in the presentment of facts, which was perhaps the unavoidable result of a constant association in the securing of data with those who were themselves, because of reasons we have pointed out, thoroughly biased, but, of course, not ready to admit that fact.

THE SOUNDNESS OF OUR ASSUMPTIONS

The engineering report devotes no space to presenting or establishing the soundness of its basic assumptions. We, having stated our conception of the problem, will now undertake, before presenting a solution based on information we have been accumulating for over ten years, to establish that sound foundation for our premise which is essential if our conclusion is to be of any value whatsoever.

If in proving our assumptions to be accurate, we at the same time disprove the assumptions upon which the problem your engineers were set to solve was based, it will become immediately clear that a very large proportion of the tabulated information and data compiled in the report submitted to you by your engineers is, insofar as a consideration of this matter is concerned, of an academic interest only.

If travel wants to go from Boston to New York City, what effective good is accomplished by showing that a road can be built cheaper to Albany? That is an exaggerated comparison, but it serves to impress the crux of the situation west of Salt Lake City.

OUR ASSUMPTIONS DISCUSSED

We have stated our three basic assumptions; let us see whether they are sound.

Our first assumption is that the governing factor in the determination of the first road to be opened west of Salt Lake City is that of serving the interests and desires of through travel. We believe that very little argument or data is needed to prove this assumption accurate. It is an assumption which can be proven by data presented in the report of your engineers. The total tributary population along both routes considered by the engineering report—that is to say along a total of nearly 1,000 miles of highway, plus the total population in an imaginary belt some 200 miles wide, assumed to be served by both highways—is only 39,323. Such a population does not develop a heavy local travel. It averages in Utah about five individuals to the square mile and in Nevada less than one individual to the square mile. The

entire population served by both routes considered in the engineering report, between Salt Lake City and Reno, is about equivalent to the number of through tourists, headed for California, reaching Salt Lake City now during any one season.

LIGHT LOCAL TRAFFIC DEVELOPED

It is pointed out in the report of your engineers that, while the local traffic is now heavier on the Lincoln Highway in Utah than on the Northern Route and while local traffic is heavier on the Northern Route than on the Lincoln Highway in Nevada, this question of local traffic is inconsequential as the through traffic will always be heavier than any local traffic developed. The great preponderance of travel from outside the states of Utah and Nevada dictates the selection of a route best adapted to serve that travel. Also, the fact that in both states more than 75% of the cost of any road constructed is met from the Federal Treasury and represents the contribution of the whole people towards the building of a road necessary to serve the whole people is another reason why, in determining the question from a national standpoint, the national interest, which is nothing more than the interest of the through traffic, should be first considered. We have said enough on this point; the through travel is the travel that is considered by everyone, even by those western areas which are so ardently pressing for the construction of one road or the other. Even those living along the routes under controversy are interested in the construction of the one or the other because of the through travel which the improvement of either route will stimulate and not primarily because of local traffic requirements.

THE TIME ELEMENT VITAL

The second assumption upon which our statement of the problem is based is that time is an important element to be considered in the matter. We have already presented some figures to show the large volume of through travel now endeavoring to reach the West despite inadequate road conditions and to show the value of this traffic to the areas it traverses. When we speak of time as an

element, we refer to time measured in terms of years. We submit that it is highly important that a road be opened promptly. We submit that neither the vast number of motorists who wish to drive to California points next year, or during the next five or six years, nor the sections of the West eagerly anticipating this tourist traffic and its profits, is particularly interested in the theoretical completion of a through paved highway or a government standard gravel road—in, say, 1935.

Traffic bound through Salt Lake City for California has been detoured, delayed, impeded, stopped, and turned back for years because of the non-existence of any thoroughly practicable and passable highway in western Utah which could be traveled in any weather. The problem now is the need for a road immediately—as good a road as can be quickly produced—but a passable road, an open road, at once. We submit that the cost and the many years of time involved in producing a government standard road for 600 miles between Salt Lake City and California is a proposition having little important bearing on the situation at this time, when through travel, and the people of the regions traversed as well, cry out for the prompt elimination of the “low spots” and the opening up of a road in any way satisfactory and passable. One basis of consideration is practical; the other is theoretical. We maintain that the practical consideration should govern, and that the question of what route can be most quickly opened up should be one of the paramount governing factors.

The question of time to open a road is, to a large extent, determined by the question of money, for no road in the West or anywhere else can be built until it is financed; it is unnecessary for us to call to your attention the difficulty frequently, if not always, encountered in financing long sections of western road construction, Federal aid notwithstanding. We, therefore, submit that under this heading of the importance of the time element properly comes also a consideration of the possibility of promptly financing the needed construction of the most important “low spots” on the routes under consideration.

BOTH ROADS ACROSS NEVADA REQUIRED

The third assumption upon which our statement of the problem is based is that the two roads are ultimately going to be built across Nevada as money becomes available, regardless of which may be selected to carry through traffic to California. We believe that this assumption is almost self-evident and requires little supporting argument or data. The State of Nevada has included both roads in her Federal aid system. They parallel each other, are approximately 100 miles apart, and serve an area equal to the whole of France. We do not understand that there is any reason to assume that you will not approve the inclusion of both in the Nevada Federal aid system. The population along both routes in Nevada is approximately the same—15,967 along the Lincoln Highway; 15,492 along the Northern Route. These figures from your engineers' report serve well to illustrate the need for both roads.

Assuming that there can be no argument but what both routes in Nevada will be accepted in the Federal aid system, it remains only to show that the opening of both as travelable roads can be financed in the near future, whereas the government standard road, as considered in your engineers' report, cannot, in order to fully demonstrate this third assumption.

You are familiar, of course, with the fact that in Nevada the money to meet Federal aid funds for road building is largely raised by the county units. The reason for this is that the state has reached the limit of its bonded indebtedness for road building purposes, and its annual income for such purposes is not adequate to meet all the Federal aid available and, at the same time, support the State Highway Department and finance the maintenance of the road system already constructed, and the interest and sinking fund on outstanding bonds.

BOTH ROADS DESIRED BY COUNTIES TRAVERSED

While, in accordance with the law, the county funds made available to meet Federal aid are administered by the State Highway Department, it will become immediately apparent that the counties are in a position to prevent the construction of certain state highways and

Federal aid roads, which they may not immediately desire, and are also in a position to expedite, if they wish, the construction of other state highways and Federal aid roads within their borders; the State Highway Department has no reason to withhold Federal and state aid if a county desires it and raises the money necessary to meet it.

The Northern Route and the Lincoln Highway across Nevada serve entirely separate belts of territory. They are the only east and west roads through a vast region equivalent to the combined area of France and Belgium. With both roads available for Federal aid and on the State Highway System, which is the case, the people served by both roads, which means the counties so served, will see to it that progress is rapidly made on the construction of the "low spots" of each. They will at least see that this construction is not delayed longer than necessary through lack of county funds.

BOTH ROADS WILL BE PROMPTLY BUILT IN NEVADA

While it may be many years before both roads across Nevada are completed to the government standard, we submit that this is unimportant from a practical standpoint. Both roads will be quite quickly opened as passable highways across Nevada, through the early financing and construction of those sections of each which are bad, impassable, rough, or difficult to travel. It suffices here to state that those sections of the Lincoln Highway between Ibapah, Utah (near the Utah-Nevada line), and Carson City or Reno which require improvement in order to open a satisfactory through road across the state are already under contract, not only between this Association and the State Highway Department of Nevada, but between the State of Nevada and your Department. For all practical traveling purposes, therefore, the Lincoln Highway will be opened across Nevada in 1924. It will not be many years before the Northern Route is brought into very acceptable driving condition across the state.

We believe that we have shown that both routes across Nevada will be built. The only Nevada construction affected by the controversy, or by your settlement of it,

would be the roads connecting Wells and Ely with the Utah State line, a matter relatively unimportant to the population of Nevada, nearly all of which, along the Northern Route, lies west of Wells and along the Lincoln Highway lies west of Ely, so that variations in the alignment of either road east of Ely or east of Wells make no particular difference except as cost is affected.

CHAPTER IV

A CONSIDERATION OF THE TRUE PROBLEM

HAVING established as sound the assumptions upon which our statement of the problem is based, it is now in order to proceed to a consideration of that problem and an attempt to solve it.

We repeat our statement of the problem to be solved:

What road between Main Forks, Utah, and Sacramento, Calif., is it the more important to open first for the through traffic, i. e., which road serves best the majority of through traffic headed west from Salt Lake City, whether headed for central or southern California and which route can be more quickly put into practicable, travelable condition? If the route by way of Ely is shown to be the route of first importance to serve the greatest volume of traffic, then which route to Ely can be first and more economically opened for tourist travel, that by way of Ibapah or that by way of Wendover?

TWO MAIN OBJECTIVES ON COAST

As the first part of our problem indicates, we consider it of the greatest importance to find, if possible, a portion or length of highway common to a road from Salt Lake City to both San Francisco and Los Angeles. This is much more important than it is to find a section of highway common to two routes across Nevada from Salt Lake City to Reno. In the latter case, the only incentive is a rather questionable economy, while in the former is involved the true strategy of route selection, i. e., the determination of the natural point of traffic division, dictated by topography, where from a common route the traffic diverges for different and widely separated objectives.

SERVING ALL WEST-BOUND TRAFFIC

Through travel heading west from Salt Lake City has two possible primary objectives, i. e., either the southern or northern half of California. We have previously pointed out how travel interested at all in directness would, from points as far east as Chicago or Kansas City, reach Portland, Seattle or Los Angeles. Travel heading for the Pacific Northwest, and reaching Salt Lake City, would go north from that point on connecting roads via Ogden, Utah, Pocatello and Boise, Idaho, etc. The only travel wishing direct connections, which would leave Salt Lake City on a western road, would be; either travel headed for San Francisco or that region of California for which Sacramento is the cross-roads, including Lake Tahoe and any point north of Fresno; or, travel headed for Los Angeles or any point in California south of Fresno.

We have elsewhere stated the fact that more than fifty per cent of the travel leaving Salt Lake City on any western road is headed for southern California. We know this to be true from years of study of west-bound travel, from years of answering tourists' inquiries as to routes to California points, from years of travel along the trails involved, and of securing information from hotels, garages, touring bureaus, and from travelers themselves along the road in tourists' camps, etc. No one will deny the fact that more than half the travel reaching Salt Lake City wishes to go most directly into southern California. This will be admitted as quickly in northern California as anywhere. No doubt this desire on the part of the larger proportion of the travel is due simply to the greater renown of the southern half of the state, or the greater enterprise shown by southern California in exploiting its natural attractions.

SIXTY PER CENT OF TRAVEL LEAVES SALT LAKE CITY FOR SOUTHERN CALIFORNIA

As some indication of the way the traffic went in 1922 we quote figures supplied by the Utah State Automobile Association from the records kept at its touring bureau at Salt Lake City during the twelve months of the calen-

dar year 1922. This bureau kept a record of every tourist applying for information, including data as to the road over which the tourist reached Salt Lake City and the road over which he was leaving, and his destination. The bureau estimates that only one tourist in four, arriving in Salt Lake City during the season, called at the bureau for information; so that to get an accurate figure representing the tourist travel leaving Salt Lake City west-bound last year, the following figures should be multiplied by four:

Tourists leaving S. L. on Arrowhead Trail for Los Angeles	4,228
Tourists leaving S. L. on Lincoln Highway for San Francisco	3,051
Tourists leaving S. L. on Lincoln Highway for Ely, Nev., there to follow Midland Trail to Los Angeles	370
Total	7,649

It will be noticed that the recorded traffic through Salt Lake City during 1922 showed a total of 4,598 tourists bound for southern California out of a total of 7,649 bound west. In other words, 60% of the travel leaving Salt Lake City left for Los Angeles or southern California. It has been our experience that this proportion would hold good for any given period of time travel might be checked. In fact, before the Lincoln Highway in Nevada had been improved at its worst point, the Fallon Sink, and, at a time, therefore, when the road to Los Angeles was no worse than the road to San Francisco, nearer 75% of all west-bound traffic went into southern California. It is entirely adequate for our purpose, however, to have demonstrated our contention that over 50% of all travel leaving Salt Lake City for California desires to reach, most directly, southern California.

CALIFORNIA IS THE TOURISTS' GOAL

We believe we have established "where the travel wants to go." This was vital to a consideration of the first part of our problem, for to us it seems utterly futile to endeavor to locate a route, upon which first attention

is to be concentrated in the interest of through traffic, before determining where that traffic wants to go.

We have shown that the traffic which is of interest to your Department in this matter—that is, the through traffic west of Salt Lake City—wants to go to California. We have shown that more of it wants to go to southern California than desires to reach central and northern California.

With those facts established it becomes possible to consider intelligently, and to look for light on, “the true problem”—“what road between Main Forks, Utah, and Sacramento, California, is it more important to open first for the through traffic, i. e., which road serves best the majority of the through traffic headed west from Salt Lake City, whether headed for central or southern California.”

THE TWO ROADS TO SACRAMENTO

We have shown that traffic headed for central or northern California is headed for Sacramento. That is, Sacramento is the best common point which can be selected in northern California as the objective of travel which will spread over all that region north of Fresno. Of course, travel heading for the Yosemite or Stockton, for points on Lake Tahoe and other scenic regions in northern California east of Sacramento would not necessarily reach that city. This travel would, however, follow as far as it went the identical shortest and most direct route leading to Sacramento. California's capital is “the greatest common denominator” of travel into California north of Fresno. Our chart map shows this clearly.

As our statement of the first part of our problem indicates, there is more than one way of reaching Sacramento from Main Forks, Utah. There are two roads connecting these two terminals of our problem. One is, in the main, the route discussed in the report of your engineers as “the Northern Route.” It consists of the route your engineers discuss in detail between Main Forks, Utah, and Wadsworth, Nevada, but with the addition of the shortest and most direct line continuing on from Wadsworth, Nevada, to Sacramento, California, as is

indicated on our map. The distance, added to the route discussed by your engineers, in carrying it on to its true western terminus at Sacramento, is 180.2 miles.

WADSWORTH NOT ON SOUTHERN ROUTE

The other route between Main Forks, Utah, and Sacramento, California, is, in the main, the route discussed by your engineers as "the Southern Route," the difference being that your engineers considered this route between Main Forks, Utah, and Wadsworth, Nevada, whereas this "Southern Route" or, as it is generally known, the Lincoln Highway, does not go into Wadsworth, Nevada, at all in following its shortest and most direct course into Sacramento. Accordingly, as will be noted from our map, we show the Southern Route, or Lincoln Highway, as running from Fallon, Nevada, to Carson City, the State Capital, and thence to Sacramento, instead of from Fallon to Wadsworth. The link between Fallon and Wadsworth, while a part of the Lincoln Highway branch from Fallon to Reno, has no part in the consideration of this problem and is indicated on our map as a relatively unimportant road, which it is, if one is endeavoring to follow the shortest line and, for that matter, the easiest grade and the most pleasing and historic country, between Fallon, Nevada, and Sacramento, California.

We ask you to consider on the map, carefully, the two ultimate routes between Main Forks, Utah, and Sacramento, California. We do not propose to enter here into detailed consideration of the relative merits of each of these routes from the standpoint of distance, grades, population, valuation, etc., etc. As we have pointed out, we believe these things should have little bearing on the decision. At least their importance is entirely overshadowed by considerations of greater moment. Because all of the travel leaving Salt Lake City is not going to Sacramento; only half of it, or less than half, cares to reach Sacramento at all. It is, therefore, necessary to give just as much consideration to the providing of a route to Los Angeles as to the providing of a route to Sacramento. One is just as important as the other. Those looking at this problem from a national standpoint have no more

reason to disregard the best interests of that travel seeking the shortest, most direct, convenient and satisfactory road to Los Angeles than they have to disregard the desires and conveniences of that travel, certainly no greater in volume and, as is generally conceded, much less, desirous of reaching Sacramento.

BOTH ROUTES MAY BE ULTIMATELY NEEDED

It will be noted that our problem reads "what road * * is it more important to open first," etc. It is clear, in view of the financial restrictions which will, under the best arrangements, permit of the construction of but one road at a time in western Utah and eastern Nevada, that at present a choice must be made which chiefly involves the time element.

No doubt during the coming years, and while our great national system of roads is gradually evolving, it will become possible and practical and necessary, in view of increased traffic, to perhaps provide two roads.

We repeat that our contention is not that ultimately two roads may not be needed. Our contention is, however, that two roads are not **immediately** needed and that one road or the other can, and should be, opened at once. Such being the case, the one to be opened at once is undoubtedly that one which serves best the majority of the traffic headed for both Sacramento and Los Angeles.

THE LINCOLN WAY SERVES ALL TRAVEL TO CALIFORNIA

Referring again to our map, it will be noted that after this consideration of quickest traffic service to the greatest number, the answer to the first part of our problem becomes quite simple. The Northern Route from Main Forks to Sacramento by way of Wendover, Utah, and Reno, Nevada, a distance of 681.7 miles, provides nowhere along its length any opportunity of reaching southern California, except by the most roundabout ways. In fact, once the traveler has left Main Forks, Utah, on this Northern Route, he must continue on into central California, even if his ultimate objective is southern California. He has no alternative.

The Lincoln Highway, on the other hand, which measures but 669.5 miles between Main Forks, Utah, and Sacramento, by way of Ibapah, Utah, Ely and Carson City, Nevada, provides not only the shortest route to Sacramento, but, through its connection with the Midland Trail at Ely, Nevada, the shortest, most direct and satisfactory route also to Los Angeles. It is natural that the Lincoln Highway should, as at present plotted, provide this important connection to Los Angeles, as well as one to Sacramento and San Francisco, for it was originally selected with just this purpose at the time when, in 1913, the guiding principle of route strategy and topography, we have pointed out, dictated the general course of the Highway between the two Coasts.

A WINTER ROUTE THROUGH THE SIERRAS

The importance of providing that travel which wishes to reach central California with a route into Sacramento open and passable earlier in the spring and later in the fall than either of the passes through the Sierras followed by the Lincoln Highway branches north and south of Lake Tahoe, should not be overlooked. This consideration is an important one indeed, and tends merely to emphasize still further the important necessity of opening first that road which leads through Ely, Nevada. For, even that proportion of the total travel west-bound from Salt Lake City which may desire to pass through Sacramento, may, by proceeding to Ely, Nevada, and from there via the Midland Trail to Mojave, California, and thence over Tehachapi Pass, reach Bakersfield and, by going up the Valley, reach its objective during seven months in the year when it is utterly impossible to reach Sacramento on any route which traverses the summit of the Sierras north of Tehachapi.

THE TWO ROUTES TO LOS ANGELES

In order to finally and definitely establish the point we have been endeavoring to prove, i. e., that the route to Sacramento which should be first improved is the one by way of Ely, it remains only for us to demonstrate that



At the summit of the Sierras on the Lincoln Way on June 8th. Seldom is any northern pass open before June or after September



Lincoln Highway officials in the Yosemite Valley. The Lincoln Way in Both Nevada and California connects with good direct roads leading into the Yosemite National Park

for all Los Angeles travel the route via the Lincoln Highway from Main Forks to Ely, and via the Midland Trail from Ely via Tonopah and Goldfield, Big Pine and Mojave into Los Angeles, is infinitely superior and more desirable, shorter and in every way more satisfactory at all times, by every method of route comparison utilized by your engineers, than the Arrowhead Trail from Salt Lake City via St. George, Utah, Las Vegas, Nevada, Goffs and Barstow, California, to Los Angeles. This latter route is also prominently shown on our map.

During our discussion with your engineers in Washington we touched upon the necessity of reaching Ely, Nevada, with the first road west of Salt Lake City, in order to provide the best connection into southern California. We learned from them, however, that the necessity of reaching Ely had been totally disregarded in considering their problem, because of the fact that "the Arrowhead Trail will carry the travel which wishes to reach southern California from Salt Lake City."

SOUTHERN CALIFORNIA TRAVEL DESERVES CONSIDERATION

Now we respectfully submit for your consideration, Mr. Secretary, the fact that, if it is worth while to expend months in investigation of the relative merits of routes between Main Forks and Wadsworth; to devote long consideration and great care to the selection of a route between these points for the purpose of being sure that the most satisfactory, the most desirable, the shortest and the best road is finally selected and built; then it is equally worth while and of just as major importance to devote consideration, time and thought to providing the travel between Salt Lake City and Los Angeles with the shortest, best, most satisfactory and attractive route.

We can see no consistency in giving such minute consideration to every point involved in selecting the main arterial road from Main Forks to Wadsworth, while dismissing as inconsequential the same points in regard to the possible routes between Salt Lake City and Los Angeles.

We submit that, in view of the fact that an even greater volume of travel is headed from Salt Lake City

to Los Angeles than from Salt Lake City to Sacramento and northern and central California, possibly more care and attention should be concentrated on the selection of the road to be first opened into southern California than is devoted to the selection of one into northern California. We submit, further, that in view of the fact that the two possible routes between Salt Lake City and Los Angeles vary in availability, in length, and in all conditions which affect tourist traffic, much more seriously and to a much greater extent than the two possible routes into Sacramento, particular care and consideration should be devoted to the relative merits of the southern California connections.

CHAPTER V

AN IMPORTANT SUBSIDIARY PROBLEM

AT this stage in the consideration of the entire problem it becomes necessary to consider a secondary problem, to-wit; which road is the ultimate satisfactory main artery from Salt Lake City to Los Angeles? Which one does the travel want to follow: the Arrowhead Trail, or the Lincoln Highway and the Midland Trail from Ely?

The very fact that these two roads differ so materially in length and in other attributes of interest to traffic will make it comparatively a simple matter to quickly demonstrate that the Lincoln Highway and the Midland Trail are today and will be forever in the future, just as they were in 1913, the shortest and most satisfactory through connection into southern California from Salt Lake City. Please refer to the map.

COMPARATIVE DISTANCES TO LOS ANGELES

Arrowhead Trail; Salt Lake City to Los Angeles	863.9 miles
Lincoln Highway to Ely; Midland Trail, Ely to Los Angeles.....	807.3 miles

Difference: represents saving via Lincoln Highway and Midland Trail... 56.6 miles

In view of the fact that an alleged saving of twenty-two miles between Main Forks, Utah, and Wadsworth, Nevada, was made the dominating consideration in the report of your engineers, which pointed out that this saving controlled cost of construction and maintenance, time in transit, operation cost, etc., we feel that a difference in distance of 56.6 miles in the two possible routes between Salt Lake City and Los Angeles should be doubly effective in lending the weight of favorable

consideration to the importance of the Lincoln Highway and the Midland Trail as against the Arrowhead Trail.

WHICH ROAD TO LOS ANGELES FIRST?

We will not here undertake to estimate the theoretical difference in time in transit over both routes, based on the additional distance, or to estimate the extra cost of maintenance because of the additional length, or to go into the relative construction costs involved because of the additional length. We do not take up the time to go into these details because we do not believe they are of particular importance. It is not important to show that one of these roads can be maintained more cheaply, built more cheaply, or even traveled more cheaply, than the other, because the question at issue is not whether one or the other shall be built, any more than that is the question between the Lincoln Highway and the Northern Route to Sacramento. It is not a question of which road shall be built, because ultimately both roads will be built. It is a question of which should be opened first, as of first importance to the travel **now**.

This is a vast region we are considering and, ultimately, no doubt, it will be served by many roads, each with its own particular advantages for certain percentages of the travel. But we are confronted now with a condition and not a theory. We are confronted with a vast volume of present day traffic, of traffic which wishes to get into San Francisco and Los Angeles in 1923 and 1924 and 1925; which travel, amounting to hundreds of thousands of people within the next few years, is not in the slightest degree interested in the theoretical evolution of adequate connections between all main points in the West, which will undoubtedly develop during the period contemplated by the Federal Highway Act.

So the point is merely; which shall be the first road opened and made satisfactory for travel between Salt Lake City and Los Angeles? It should be the road which **can** be opened first, and which is the shortest, most direct, and would be the most popular for through travel desiring to reach southern California and only interested incidentally in points **between** Salt Lake City and southern California.

SCENIC BEAUTIES OF SOUTHERN UTAH NOT A FACTOR

No doubt an excellent case could be presented for the attractions of central and southern Utah and of the region comprising the Zion National Park and the Grand Canyon; no doubt the people of central and southern Utah could provide excellent reasons why the travel would prefer to come through there. We agree that the attractions of central and southern Utah and northern Arizona are delightful and interesting and by no means take the position that this travel should not be served by an adequate road into southern Utah, from Salt Lake City, as, in fact, it is now served. We do take the position, however, that when the problem to be considered is reaching southern California in the most direct and satisfactory and quickest manner, we are not considering the travel desiring to reach southern Utah or the Grand Canyon at all.

What, then, is the best way, the quickest way, the shortest way, and the way most easily and satisfactorily opened for through travel between Salt Lake City and Los Angeles? It is the Lincoln Highway and the Midland Trail, for via this route, once it is in satisfactory condition in Utah, the travel saves not only 56.6 miles, which is not a particularly important factor in a trip of 800 miles, but it saves also a 400-mile journey through the heart of the Mohave Desert, a most uninteresting, a most trying, and, we might also say, a most dangerous trip for large volumes of travel which in the main consists of people unfamiliar with desert conditions and unequipped to cope with them.

THE MOHAVE DESERT AS A CONSIDERATION

The approximate outlines of the great Mohave Desert area are indicated on our map in accordance with the best available governmental information. This desert area, approximating in size the State of Iowa, has the highest mean yearly temperature of any region in the continental United States, including and extending from Death Valley to the Mexican border. The road we are considering through the Mohave Desert traverses its

most flat and unbroken stretches, where the lack of mountains or hills prevents air currents and produces a condition of dead, still, furnace-like heat, particularly oppressive and dangerous during June, July and August, when the greatest flow of traffic into Salt Lake City is experienced. Government Weather Bureau reports from this area showed in 1922 the following temperatures in the shade: June, high 115°, low 77°, mean 88°; July, high 116°, low 84°, mean 94°; August, high 114°, low 80°, mean 92°. Temperatures in the sun would be at least 10° higher.

This Mohave Desert route, because of its high yearly mean temperature, is an excellent one for the winter travel into southern California. This winter travel to southern California, however, does not, for obvious reasons, go to Salt Lake City thru Wyoming, and down to the Mohave Desert through southern Utah. The winter traffic follows, as we have previously pointed out, the National Old Trail, sometimes called the Santa Fe Trail, which merges with the Arrowhead Trail and becomes the same road at Goffs, California. We are considering only the summer travel, which follows the great central route, or Lincoln Highway, into Salt Lake City. That summer travel, desiring to reach southern California, should not be forced to traverse that vast furnace of the Mohave Desert when there is a shorter, more pleasant and a cooler route available by way of Ely and the attractive slopes and valleys of the Sierra foothills, through Big Pine, Lone Pine and along the Los Angeles aqueduct.

UNPLEASANT CONDITIONS DO NOT STIMULATE TRAVEL

Every effort is worth while which tends to stimulate "Seeing America First." The inherent urge of Americans to travel and to see should in every proper way be encouraged. It can be no more effectively encouraged than by so selecting the main arteries of overland motor travel in the West that they present the least difficulty and hardship and the greatest degree of comfort, recreation and beauty. Then those who first venture forth from every American community return with enthusiasm and spread word of the delights awaiting the



A characteristic view on the Mohave Desert. The scenery for 400 miles is no more inviting than the temperature



Lincoln Highway officials studying touring conditions on the Mohave Desert. These trails are fast if one stays in the ruts—but the drive is not pleasurable

tourist along our western trails, and thus new travel in ever increasing volume is developed.

We can assure you from experience that the motorist, who undertakes in summer that gruelling journey through the Southwest desert, returns with no enthusiastic recommendations of the trip. He is far more likely to exaggerate the frightful heat and the experiences which were far from pleasurable and deter rather than stimulate new travel to the beauty spots of our country.

MIDLAND TRAIL CAN BE PROMPTLY IMPROVED

It may be pointed out by those sectional interests particularly desirous of seeing the Arrowhead Trail promptly completed, and which have, in the past few years, brought it to a stage of improvement which is so far superior in Utah to the road to Ely that practically all travel has been forced to take this road, that it can be opened first as the main arterial connection into southern California, due to the fact that it has already been designated on the Federal aid system of the four states involved: Utah, Arizona, Nevada and California. It may also be pointed out that the route which we are demonstrating is the more satisfactory and advisable one—that by way of Ely, Tonopah, Goldfield and Big Pine—cannot be so rapidly opened, due to the fact that an important link in central Nevada is not on the Federal aid system. Some comments on this situation are pertinent here.

It is true that the Midland Trail, in Nevada, between Ely and Tonopah, has not been designated by the State of Nevada as a portion of her Federal aid system. This does not in any way detract from the importance of this road, any more than the omission by Utah of the Lincoln Way from her Federal aid system detracts from its fundamental importance.

The Midland Trail has, as a matter of fact, for years been looked upon as the most important connecting link with southern California. It was the first road marked west of Salt Lake City by the Automobile Club of Southern California when that organization undertook, many years ago, to sign the important arterial roads entering

southern California. It was the road always advocated and urged upon the traveler by those in southern California who thoroughly understood the conditions, until such time as the State of Utah allowed the desert link on the Lincoln Highway to become practically impassable, while pushing rapidly to completion the road to the Arizona line on the Arrowhead Trail.

ELY TO LOS ANGELES ROUTE OF PRIMARY IMPORTANCE

Southern California has always recognized the vital importance of the Midland Trail. That region has even been accused, by other sections involved in the original controversy affecting traffic, of enterprisingly stationing representatives at the strategic division point, Ely, Nev., to direct the flow of travel onto this road to the south.

Our Association has from the very first recognized the vital importance of this connection. In fact, the Association has upon several occasions most seriously debated whether or not it should not try to change the main route of the Lincoln Way to follow the Midland Trail, instead of over the high Sierras into Sacramento. Interests in southern California have for many years urged upon this organization the designation of the Midland Trail as a branch of the Lincoln Highway, or even the moving of the western Lincoln Highway terminus to Los Angeles. Much careful consideration has been given to this suggestion and the general public has never known how near our Board has at times come to making this decision, particularly in view of the very large volume of through traffic headed for southern California, which our years of study showed to be even greater than that volume desiring to reach central or northern California. Thoughtful consideration, however, finally led the Association to adhere to its single original path. But the fact that we have never complied with the appeal of Los Angeles to name the road from Ely into that metropolis as the Lincoln Way does not lessen the importance of this highway from the national through traffic point of view.

NEVADA'S FEDERAL AID MILEAGE RESTRICTED

Now this route is not of vital local importance in Nevada. As you know, Nevada, the sixth largest state

in area in the Union, is allowed by law only 1,540 miles of Federal aid roads, with the consequence that all of the routes even of first importance from the national standpoint cannot be included in the originally designated system. Some sacrifice must be made and this sacrifice is, not without reason, made where important through roads are of the least importance locally. Local travel between Ely and Tonopah is insignificant. Moreover, the road between Ely and Tonopah crosses four U. S. Forest Reserves in a distance of approximately 180 miles. Sections of this highway within the Forest Reserves and even many sections "adjacent to and connecting with" the Forest Reserve roads will be built from the special Forest Reserve appropriation and consequently could be eliminated more safely from the Federal aid system of the state than other highways without the advantage of Forest road construction money. For example, the road leading from the Utah line at Wendover across northern Nevada into Reno does not anywhere in its entire length pass through a single Forest Reserve. For these reasons, explained by Nevada State Highway officials, the Ely-Tonopah link has been omitted from the first designated system.

Thus it will be seen that no undue importance should be placed upon the omission of that link in the Midland Trail between Ely and Tonopah, Nevada, from the Federal aid system of that state. Other considerations, having nothing to do with the importance of this link, dictated this omission, not the least among these considerations being the fact that this highway is even now in very excellent condition, as the trails of the West go. The only exception to this broad general statement, which applies to the entire length under consideration, is a short section in the northern part of Nye County, which county has already taken steps to improve without Federal aid.

MIDLAND TRAIL NATURAL AND BEST ROAD TO LOS ANGELES

So naturally excellent was the road from Ely to Los Angeles as compared with other natural trails in Nevada

and California, even including the Lincoln Highway from Ely to Sacramento, that in the past the largest proportion of the travel leaving Salt Lake City for California points followed the Midland Trail. The only reason that during recent years this vast volume of travel, which would naturally and normally take the Ely route because of its many advantages, has taken the longer, more difficult, and excessively hot, uninteresting and dangerous road via the Mohave Desert on the Arrowhead Trail is simply that it has had no alternative, as a result of the policies of the Utah State Highway Department, previously commented upon, and dictated by the natural sectional interests of southern and central Utah. Giving travel no choice of routes between Salt Lake City and Los Angeles, the State Highway Department of Utah has, since January 1st, 1921, failed to take any steps to provide an adequate connection with Ely.

We maintain that should a road in Utah connecting Salt Lake City with Ibapah and the existing trail from Ibapah to Ely be improved to anywhere near the standard adopted for the Arrowhead Trail in Utah, 90 per cent of the traffic headed for southern California would go by way of Ely. Why should it not? The saving in mileage is considerable and the scenery and climatic conditions incomparably favor the Ely route. The road from Tonopah to Los Angeles (all a portion of the Federal aid system of Nevada and California) touches but a small corner of the Mohave Desert, which can be traversed in a few hours. Further, from Tonopah leads that important connection, on the Nevada Federal aid system, to Mono Lake and via Tioga Pass into the Yosemite Valley. Further, the Midland Trail from Ely to Mojave, let us impress again, offers the shortest and most direct winter road between Salt Lake City and Sacramento, by way of Mojave, Bakersfield and the Valley Route to Stockton, during those months in the spring and fall when all the high passes of the Sierras are closed with snow, but when Ely can be easily reached from Salt Lake City.



A view showing the excellent natural trail characteristic of the present condition of the Midland Trail from Ely, Nevada, to Tonopah, Goldfield and southern California



Lincoln Highway officials on the Midland Trail between Ely, Nevada, and Los Angeles, showing one of the excellent signs erected along the road by the Automobile Club of Southern California

ELY, NEVADA, IS STRATEGIC POINT TO BE REACHED

We believe that we have demonstrated that the Arrowhead Trail should not be looked upon as satisfactory as the only connection for southern California travel from Salt Lake City; should not be looked upon as sufficiently satisfactory to warrant removing from consideration the importance of the Lincoln Highway, Ely connection. With this important point firmly established we may return to the consideration of the first portion of our original problem regarding the two main roads from Main Forks, Utah, to Sacramento, California.

We have found that the Lincoln Highway from Main Forks to Ely, Nevada, provides a link common to two highly important Pacific Coast connections—important to southern California travel as it is to Sacramento-bound travel. We maintain, Mr. Secretary, that the importance of this common link for 213.2 miles from Main Forks, Utah, to Ely, Nevada, overshadows the importance of all other considerations possible between the Northern Route and the Lincoln Highway as connections to Sacramento from Main Forks. The Northern Route is a road from Main Forks to Sacramento only. The Lincoln Highway is a road from Main Forks to Sacramento and, in addition, a road from Main Forks to Ely and Los Angeles. Unless, therefore, a shorter, better, more easily and quickly opened, more natural and inexpensive road, topographically, can be shown as possible between Main Forks and Ely than the Lincoln Highway, it is the road which should be first opened, not only between Main Forks and Ely, but between Main Forks and Sacramento.

We do not disregard the other considerations discussed in the report of your engineers. We will later touch upon these various, relatively minor considerations, as properly applied to the first problem between Main Forks and Sacramento. We do pass them over here as entirely subservient to the main broad strategic consideration of reaching Ely, Nevada, with the first road to be opened west of Salt Lake City.

It will be remembered that one of our assumptions in the stating of our problem was that both roads across Nevada would be built. We established the soundness of this assumption. It is particularly true that regardless of the decision of your Department the road from Ely west will be built on the Lincoln Highway. All urgently required improvements are even now under contract for completion in 1923 and 1924. It is not, therefore, of any importance whatever to compare in detail here the road between Ely and Sacramento and the road between Wells and Sacramento, the latter by the way of the Northern Route and Reno, the former by the way of the Lincoln Highway and Carson City.

LINCOLN WAY MOST IMPORTANT TO OPEN FIRST

We have reduced the problem to what we believe is its essence. We have answered the first part of our statement of the problem by showing that the Lincoln Highway is the most important to open first for the through traffic between Main Forks, Utah, and Sacramento, California, because it best serves the major part of the through traffic headed west from Salt Lake City, whether for central or southern California.

Having shown that it is most important to open the Lincoln Highway first for the through travel, we will now show that the Lincoln Highway **can** be opened first; that of the two routes under consideration it can be most quickly put into a thoroughly practicable, travelable condition. We have already emphasized the importance of the time element. We have already emphasized the importance of the strategic location of the Lincoln Highway. We will now emphasize the practicability of opening the Lincoln Highway first—a consideration second to none.

CHAPTER VI

THE LINCOLN HIGHWAY CAN BE OPENED FIRST

WE cannot too strongly emphasize the following statement of fact:

The completion of **existing** contracts in Utah and Nevada will provide an open and satisfactory route into California from Salt Lake City.

That statement is based upon ten years of observation and study of the relative conditions of various sections of the Lincoln Highway between Salt Lake City and California, which study was essential preliminary to the ratification of gifts totalling over a quarter of a million dollars to the two states, Utah and Nevada, for the purpose of assisting in the prompt completion of those sections which, as compared to the route as a whole, required early improvement.

OUR DETAILED KNOWLEDGE OF THE ROAD CONDITIONS

We submit that in examining into the merits of road conditions between Main Forks and Sacramento during the past ten years, with the purpose in mind of applying our money only where it was most needed, we would necessarily acquire a very thorough understanding of road conditions and be in a position to accurately state where improvement is needed to open up a really serviceable and travelable road.

Our investigations, made primarily with the conservation of our own funds in mind, provide information of equal importance in considering the application of Federal funds, if Federal funds must be applied at first,

only when urgently needed. This is really the case, for, as we shall show later, it is not possible to undertake at once the construction of a government standard road for the entire distance between Main Forks and Sacramento on either the Lincoln Highway or the Northern Route.

Comparison of the relative total cost of completion to government standard is interesting, but has no bearing on the immediate problem. It is of very great importance to consider where the application of Federal aid will first open a satisfactory route.

COMPARISON OF IMPROVEMENTS REQUIRED

In the tables which follow, the cost figures are relatively unimportant; they are the figures, in each instance, given in your engineers' report as the cost per mile of constructing, to the government standard specifications, the project sections under consideration. They are relatively unimportant because the important consideration is the **mileage which requires improvement to open a satisfactory road**. Comparison of the relative cost estimates per mile is not vital.

BOTH ROUTES NOW PASSABLE IN CALIFORNIA

We have used your engineers' figures for cost of construction along the Northern Route from Main Forks to Wadsworth, and have assumed no additional construction to be necessary west of Wadsworth on the Northern Route to open a satisfactory road. A great deal of new construction is projected on this road between Reno and Sacramento, but the road at present is thoroughly practicable and passable.

On the Lincoln Highway we have utilized your engineers' cost figures from Main Forks to Leeteville, a point eight miles west of Fallon. In estimating cost of construction to open a satisfactory road between Leeteville

and Carson City we have utilized a cost per mile based upon experience tables for road construction in Nevada in like territory, and through a substantially similar terrain. We are assuming that no new construction is required west of Carson City on the Lincoln Highway to open a satisfactory road into Sacramento, although, as in the instance of the Northern Route, some improvement will be undertaken very shortly along Lake Tahoe in Nevada, and between the California State line and Placerville.

We fully appreciate that Federal aid will not be granted for short sections of temporary improvement here and there on any route and, as a consequence, have indicated in the following tables the entire project brought up to the government standard in each instance, although in many cases these projects include sections which are now and would be for many years perfectly satisfactory for the travel.

The fact that it is necessary to consider the completion of a government standard road where any improvement with the Federal aid is undertaken is responsible for the apparent inconsistency between the following table of improvements required on the Lincoln Highway and our statement that "the completion of existing contracts would provide an open and satisfactory route into California." Existing contracts with the State of Utah which did not contemplate the use of Federal aid would provide an open and satisfactory route in that state, but would not provide one up to the government standard.

We have appended such notes as will give the best information we have as to the conditions on each of the several locations designated.

First let us consider the sections of construction necessary on the Lincoln Highway, using our measurements and your engineers' cost figures:

CONSTRUCTION NECESSARY ON THE LINCOLN HIGHWAY

		16 Feet Wide		24 Feet Wide	
	Miles	Per Mile	Total Cost	Per Mile	Total Cost
Orr's to Granite.....	34.6	\$ 8,433.	\$ 291,782.	\$12,745.	\$ 440,977.
Granite to Black Point.....	20.3	to complete	186,932.	to complete	266,380.
Black Point to State Line.....	27.1	8,953.	242,626.	14,443.	391,405.
Pancake to Eureka.....	17.3	9,441.	163,329.	14,579.	252,216.
Eureka to Hay Ranch.....	11.15	8,452.	94,240.	12,585.	140,323.
Austin to Campbell.....	35.6	10,051.	357,815.	13,571.	483,127.
Campbell to Eastgate.....	17.6	12,614.	222,006.	18,652.	328,275.
Eastgate to Westgate.....	10.25	7,487.	76,769.	10,908.	111,807.
Grimes to Fallon	10.0	10,170.	101,700.	14,310.	143,100.
Leeteville to Lyon Co. Line.....	17.0	7,000.	119,000.	10,500.	178,500.
Total	200.9		\$1,856,394.		\$2,736,112.

- (a) Contract for construction has been let.
- (b) Project submitted to Government.
- (c) Survey nearly completed. Lincoln Highway Association contract with state.
- (d) Project plans completed, approved and ready for contract.
- (e) Contract let for 5.0 mi. of this—balance to be let by June 1st.
- (f) Under contract between Lincoln Highway Association and Utah.
- (g) State has promised construction in 1923.
- (h) Not on Federal aid system—cost estimate is ours.



A view looking south toward Tooele, Utah, along the excellent gravel Lincoln Highway in Rush Valley



Another view showing the excellent improvement possible at slight expense on the Lincoln Way west of Salt Lake City, Utah



Lincoln Highway officials on the Lincoln Way between Tooele, Utah, and Fisher Pass. This requires no additional improvement

At this point an explanation is in order so that one may get a clear picture of the condition of the road between Main Forks and California, both now and when the several projects have been completed.

DETAILED CONDITIONS IN UTAH

From Main Forks to the east end of the Fisher Pass section is now a very excellent road, constructed by the state and county, with a good gravel surface. It is not likely that this will be touched under any conditions for several years.

The Fisher Pass construction is adequate for many years, if it is given the ordinary maintenance that state roads should receive.

From the west end of Fisher Pass to Orr's Ranch is a road constructed by the county about five years ago, which is adequate for some time.

From Orr's to Granite Mountain should be built entire, although there is not to exceed three miles in all of this distance on which any difficulties are ever presented.

From Granite Mountain to Black Point is the Good-year Section which necessarily should be completed as promptly as possible.

From Black Point to the state line should also be early re-located and properly constructed, although most of this is now an acceptable road in nearly any weather. This reconstruction is not immediately imperative.

The stretch from Orr's Ranch to Granite Mountain and Black Point, and an additional distance of approximately seven miles from Black Point to a connection with the old trail in Overland Canyon, is included in the contract between the Lincoln Highway Association and the State of Utah. There is, therefore, approximately 20 miles via Overland Canyon and Ibapah to the state line which is not under any contract or project; it is on the Utah State Highway System.

DETAILED CONDITIONS IN NEVADA

From the Utah-Nevada state line to Ely is now a very excellent road, constructed by the county, which will be adequate to carry the traffic for many years, and which is not in need of reconstruction.

From Ely to Keystone (approximately five miles) much new location and construction has been done with state aid, and nothing further is necessary; however, new construction is planned for the coming year in this locality.

From Keystone to Robinson Summit was completed with Federal aid in 1921.

From Robinson Summit to Pancake Summit is now under construction and will be completed with Federal aid during the year 1923.

From Pancake Summit to Eureka the existing road is sufficient for present needs, but a new location and new construction is projected and the state has announced it will construct this section during the year 1923.

The stretch from Eureka to the Hay Ranch is already under contract for construction, and it is anticipated this stretch will be completed during the year 1923.

There is now an acceptable road between the Hay Ranch and Austin, one which will be adequate for a number of years and which can be improved as the necessity arises.

From Austin to Westgate should be constructed as rapidly as possible, as the present road, which is located on a different site from the proposed new route, cuts up quite badly in summer and is the roughest stretch on the Lincoln Highway in Nevada; however, it is always passable without difficulty, if one drives at a reasonable rate. The state has divided this section into three parts. First, from Austin to Campbell Creek, which section we understand has been submitted to your Department for

approval preliminary to making final survey. Second, from Campbell Creek to Eastgate, now under survey, the field work being nearly completed. Third, from Eastgate to Westgate, for which project plans are completed and have been approved by the Bureau of Public Roads. The contract for this project is now ready to be let with Federal aid.

Between Austin and Westgate the Lincoln Highway Association is assisting in the financing of the new construction, and our agreement with the State of Nevada provides that this section shall be completed by June 1st, 1924; if not finished by that date the state loses the financial assistance we have offered. We, therefore, believe that there is no question but what this will be completed by the date specified.

Between Westgate and Grimes much new excellent construction has been accomplished with Federal aid during the past four years, including the Fallon Sink; most of this stretch is through a flat, gravelly country so that, even on those sections not newly constructed, there will be no possibility of any really bad conditions developing for several years.

From Grimes to Fallon there is a stretch of approximately ten miles with reference to which there has been some difference of opinion as to the proper location. This has now been settled and a contract has been let, with Government aid, for five miles of the distance. The state promises that the remaining distance will be under contract by June, 1923.

From Fallon to Leeteville an excellent gravel road has been built by the state; in 1922 this was extended to Fernley.

The road from Fernley to Reno is always good and none of it needs immediate reconstruction in order to make a passable road.

CHOICE OF ROUTES AT RENO AND LEETEVILLE

At Reno travel has the choice of taking the concrete road to Carson City and entering California south of Lake Tahoe, or following the state highway west and entering California near Verdi, Nevada. The route via Verdi is not as good as the one south of the Lake, but it is used by nearly 50 per cent of the travel which enters California from Reno. Therefore, it is a reasonably acceptable road.

To open the way to California by the shortest possible route, new construction should be had between Leeteville and the Lyon county line by way of Lahontan; this stretch is not on the Federal aid system of Nevada, but its improvement is under contemplation by joint county and state funds.

From the Lyon county line to Carson City there is an excellent county road, which does not need more than the ordinary county maintenance to keep it in very acceptable condition.

From Carson City to Lake Tahoe is an excellent mountain road, built by convict labor and well maintained by the state; it is wide enough for three cars at any place.

A good county constructed road extends from Glenbrook, on the shore of Lake Tahoe, to the state line and, while improvement of this section would facilitate travel, it is never in such condition as to cause trouble. It is likely that the Lincoln Highway Association will assist in the immediate reconstruction of this section, which should be widened to take care of the heavy traffic.

From the Nevada-California state line to Placerville, California, is a very excellent graded road, constructed by the state and county, and well maintained by the state forces. During the season it is open it carries hundreds of cars every day, including heavy stages running from

Sacramento to Lake Tahoe. It is one of the favorite drives for people living in northern California, which is sufficient testimonial of its present condition.

TWO HUNDRED MILES OF IMPROVEMENT REQUIRED ON LINCOLN WAY

From the above it will be noted that only about thirty-seven miles of the construction promptly needed to open the Lincoln Way has not in some way already been provided for; to-wit, fifteen miles immediately east of the Utah-Nevada line, five miles between Grimes and Fallon and seventeen miles between Leeteville and the Lyon county line.

Having no engineering data for the stretch between Leeteville and the Lyon county line, we estimated, in the foregoing table, a 16' road at \$7,000.00 per mile, and a 24' road at 50 per cent more. We believe this to be a more than safe figure, as experience in different localities in Nevada has demonstrated that 16' roads—in fact, 20' roads, with a 10' gravel surface—are being constructed at approximately \$6,000.00 per mile in localities where supplies are not as convenient as they would be on this particular stretch.

The foregoing tabulation shows it will be necessary to build approximately 200 miles of road to open, as adequate and satisfactory, the Lincoln Highway between Salt Lake City and California. According to your engineers' estimates this would cost approximately \$1,856,000.00. Comparison of their estimated costs and the actual expenditure on contracts let in the localities in which they have given figures, leads us to believe that \$1,250,000.00 would be more nearly a correct figure. We will take up the question of these estimates more thoroughly later.

Let us now take for consideration the opening of the Northern Route.

CONSTRUCTION NECESSARY ON THE NORTHERN ROUTE

	16 Feet Wide		24 Feet Wide	
	Miles	Per Mile	Total Cost	Per Mile
Timpie Forks to Knolls.....	35.7	\$ 5,817.00	\$ 207,667.00	\$ 9,358.00
Knolls to Wendover	40.3	to complete	299,954.00	to complete
Knolls to Wendover — added to cover error in Engineers' Report (See Appendix B)				
Wendover to Wells.....	65.5	7,666.00	80,000.00	80,000.00
Carlin to Dunphy.....	30.63	12,403.00	502,123.00	11,353.00
Dunphy to Battle Mountain.....	21.5	6,537.00	379,904.00	17,654.00
Battle Mountain to Stone House..	8.52	6,921.00	140,545.50	9,455.00
Stone House to Winnemucca.....	36.7	6,889.00	58,966.92	9,881.00
Winnemucca to Mill City.....	29.0	8,956.00	252,826.30	11,287.00
Lovelocks to Wadsworth.....	64.0	10,243.00	259,724.00	12,432.00
			655,552.00	15,202.00
Total	331.85		\$2,837,262.72	\$4,030,995.02
Wendover to Schellbourne Jct.....	82.5	10,891.00	898,507.50	15,625.00
	414.35		\$3,735,770.22	\$5,320,057.52

NOTE.—Of the above 414.35 miles, 5.6 miles are under agreement and 13.2 miles are under construction—a total of 18.8 miles.

In the foregoing table we have shown only construction necessary to provide an always passable road, following the same general rule followed in the table relating to Lincoln Highway improvement.

DETAILED CONDITIONS IN UTAH

For nearly the entire distance between Main Forks and Timpie Forks (by which we designate a fork of the road—one branch leading south in Skull Valley and the other turning west toward Wendover) a very good gravel road, constructed by the county with state aid, now exists; with reasonable maintenance no new construction need be made on this section immediately.

From Timpie Forks to Knolls is a rough trail which should be rebuilt entire.

From Knolls to Wendover the road has never been passable to a degree permitting its proponents to advise tourists to attempt to travel it.

We have appended two figures for this stretch—the first being that submitted by the engineering report as the amount of money necessary to complete this 40-mile stretch. Since obtaining this figure from the report we have been advised that the estimate has been increased by the sum of \$80,000.00.

DETAILED CONDITIONS IN NEVADA

From Wendover to Wells there is practically no road at all at present, certainly none in the new location selected by the Federal engineers. The present trail is not at all acceptable, as it has some grades which many cars would have difficulty in negotiating.

From Wells to Halleck there is a reasonably good road at present, one which is not in immediate need of reconstruction.

From Halleck to Carlin is practically all new state construction.

From Carlin to Dunphy about thirty miles of new construction is certainly required before this will be a passable route.

Between Dunphy and Battle Mountain there is another stretch of trail which is about as bad as one could expect to find anywhere, and which should be immediately built if it is desirable to make this an open road.

Between Battle Mountain and Stone House a part of the construction has been recently made; there is still required about $8\frac{1}{2}$ miles of very necessary construction.

Between Stone House and Winnemucca there is a very bad trail, which should be entirely rebuilt.

From Winnemucca to Mill City the same condition exists as east of Winnemucca; this is a very silty soil and cuts up badly during the summer months.

From Mill City to Lovelocks new construction has recently been completed by the state and nothing more is now required.

From Lovelocks to Wadsworth is a very silty country with considerable heavy sand—so bad that during the hot part of the summer many cars, in fact, most cars, have difficulty in getting through at all. This construction is imperative.

The stretches west of Wadsworth were given in detail in our comments relative to the Lincoln Highway.

THREE HUNDRED AND THIRTY MILES OF IMPROVEMENT REQUIRED ON NORTHERN ROUTE

From this it will be seen that approximately 332 miles of new construction is required immediately in order to make this route passable between Salt Lake City and Wadsworth. The report's figures for the cost of this construction total \$2,837,000.00.

While it is expected that Federal aid will be sought on all of this construction, but 18.8 miles of it is actually under approved project. Improvement of the stretch in Humboldt County, east of Winnemucca, is dependent upon a proposed county bond issue. The same condition exists in Pershing County, covering both the stretch between Lovelocks and the Churchill County line and that between Mill City and the Humboldt County line. As we understand it, a bond issue is necessary in order to perform any of the construction in Humboldt County.

These unfinanced sections approximate ninety miles.

As opposed to the above picture, there is no part of



The excellent, recently completed, government standard gravel road constructed on the Lincoln Highway west of Fallon, Nevada



A section of fast natural road on the Midland Trail in Nevada, showing the nature of those sections which have not been constructed

the Lincoln Highway in the State of Nevada, the immediate construction of which is needed, that is not financed.

CONNECTIONS FOR LOCAL TRAVEL

In making the foregoing computations we have not taken into consideration any connections between a possible single road in Utah with the double road system in Nevada. If the Lincoln Highway in Utah is constructed there will be no immediate demand for such a connection, as there is very little, if any, local travel between northern Nevada and Salt Lake City. On the other hand, if the Wendover Road is constructed and the Lincoln Highway in Utah is not constructed, there will be a very strong, pronounced and insistent demand from central Nevada for a connection into Salt Lake City, as it has always had this connection and local travel is well established between Ely and Salt Lake City.

The report suggests that in such a contingency there be a road constructed between Wendover and Schellbourne Junction, a distance which is shown to be 82.5 miles, at a cost of approximately \$900,000.00 for a 16' road, or \$1,300,000.00 for a 24' road. Inasmuch as there has never been even sufficient local travel through the proposed location to bring about the marking of a local trail; inasmuch as a stranger would now find it impossible to find his way between those two points unless he took a guide with him, we cannot believe that such an extravagant use of money would ever be allowed as would be necessary to construct this piece of road.

The report says that if only the Wendover Road in Utah is constructed, through travel will follow the Northern Route to the exclusion of the Lincoln Highway route across Nevada. This means, then, that the Wendover to Schellbourne Junction stretch would be used only by local travel. We believe local travel would never be sufficient to justify such an expense, as such travel would prefer the more thickly settled stretch extending from Schellbourne Junction, via Anderson's, Tippet and Ibapah to Wendover, even though it is 23.5 miles longer.

As the people of Ely have heretofore demonstrated, they will not quietly sit by and allow the adoption of a program in Utah which will not give them a good motor connection with that city, which is Ely's principal supply point.

THE COST ESTIMATES USED

In studying the report's estimates for construction, we note the following:

Between Ely and Pancake—a distance given as 59 miles—an average per-mile cost is estimated of \$9,094.00 for a 16' base with a 10' gravel surface. Construction has been made or is under way with Federal aid and under contract for approximately 27½ miles, to-wit, that stretch between Keystone and Illipah; the specifications were for a 20' grade with 9' of gravel on 12.5 miles and 10' of gravel on a 20' grade for 15 miles. The total cost of this construction was \$165,230.00, or an average of \$6,015.00 per mile. The report's estimate is 51 per cent above the price at which the work was actually done.

Between Mill City and Lovelocks, a stretch of 44.48 miles, contracts were let with Federal aid for 10' of gravel surfacing on a 20' grade for \$262,109.00, which is at the rate of \$5,893.00 per mile, as opposed to your report's estimate of \$7,291.00 per mile; in this instance it was 24 per cent above the experience figures.

Unfortunately, the estimates on the Lincoln Highway are proportionately twice as much out of the way as those on the Northern Route.

OUR ESTIMATES OF NEEDED IMPROVEMENT

No one familiar with the present road conditions along the Northern Route and the Lincoln Highway between Main Forks and Sacramento will be able to seriously dispute our estimates of required construction. Individual opinion may dictate certain changes in the location of required improvement, but well-informed opinion as to the total mileage of road improvement needed to effect satisfactory conditions on both routes and the relative cost of bringing those sections requiring improvement up to the government standard, cannot vary greatly.

CHAPTER VII

LINCOLN WAY BEST ROUTE TO ELY

WE have shown that not only is it of first strategic importance to open the Lincoln Way to Sacramento, but also, taking into consideration only the practical opening of a road, that the Lincoln Way can be opened first by constructing 131 miles less of needed roadway at a saving of approximately \$1,000,000.00. We have demonstrated that the primary reason for opening the Lincoln Way first is the fact that, at Ely, Nevada, it provides the important connection with southern California as well as another connecting route into northern California open practically the entire year.

It now remains to demonstrate that the Lincoln Highway from Main Forks, Utah, to Ely, Nevada, is shorter, follows the more natural topography, is of greater value to the local travel, is cheaper to construct and can be more quickly opened as compared with the other possible connection between Main Forks and Ely via Wendover, suggested by the report.

In the following table our distances are used and the cost estimates from your engineers' report.

CONSTRUCTION ONLY WHERE NEEDED TO OPEN SATISFACTORY ROAD—MAIN FORKS TO SCHELLBOURNE JCT.

THE LINCOLN HIGHWAY

<i>Project</i>	<i>Length</i>	<i>Cost</i>
Orr's to Granite Mt.....	34.6 mi.	\$ 291,782.00
Granite Mt. to Black Point...	20.3 mi.	186,932.00
Black Point to State Line....	27.1 mi.	242,626.00
Total	82.0 mi.	\$ 721,340.00

THE NORTHERN ROUTE

Timpie Forks to Knolls	35.7 mi.	\$ 207,666.90
Knolls to Wendover.....	40.3 mi.	379,954.00
Wendover to Schl. Jct.....	82.5 mi.	898,507.50
Total	158.5 mi.	\$1,486,128.40

COMPARISON

To open Northern Route to Ely 158.5 mi.	\$1,486,128.40
To open Lincoln Highway to Ely 82.0 mi.	721,340.00

Saving via Lincoln Way 76.5 mi.	\$ 764,788.40
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No immediate saving in construction whatever is possible between Wendover and Schellbourne Junction. The entire distance must be built at once to provide a connection leading by way of Wendover to Ely, as there is no present road at all between Wendover and Schellbourne Junction.

To open up the route by way of Wendover to Ely in a satisfactory condition for thru travel will therefore require the prompt construction of 76.5 miles more highway than to put the Lincoln Way in an equally satisfactory condition. The extra cost, it will be noted, of opening the northern route amounts to \$764,788.00.

OPENING LINCOLN WAY SAVES TIME AND MONEY

Now, what we are considering is the time element. Can the Lincoln Highway, because it requires 76.5 miles less construction to open, at a saving of over three-quarters of a million dollars, be opened more promptly in terms of years? The answer is that it can be and will be opened a great many years sooner, if the Lincoln Highway is designated for Federal aid in Utah.

FUNDS AVAILABLE LIMIT CONSTRUCTION PROGRESS

In neither Utah nor Nevada will the entire construction of either the Northern Route or the Lincoln Highway proceed to prompt completion, either to the standard of a government secondary road or to the standard of a primary road. Both states have too large a mileage of Federal aid system and too small a yearly sum for highway improvement to enable them to concentrate 100 per cent of the funds available for even one year on the completion of either route. We believe that this is obvious.

Projects must be built each year in both states in many counties. This construction in various parts of the state must proceed equitably, to the end that the

work accomplished every season may, insofar as it is possible, advance to approximately the same degree the road service of every section of the state.

In Utah the cost of building only those sections we have shown to be immediately necessary on the road from Main Forks to Wendover would require nearly \$600,000.00. This sum is approximately 50% of the total amount which would be available to be expended on the improvement of Utah's entire highway system in any one year, assuming a Federal aid appropriation of \$75,000,000.00.

MAXIMUM HIGHWAY FUND IN UTAH SMALL

The following figures are presented to impress this point:

Total primary Federal aid mileage designated by Utah—690 mi.

Total secondary Federal aid mileage available to Utah—994 mi.

Out of every \$75,000,000 appropriation U t a h

receives \$849,417.21

To secure this sum Utah must appropriate..... 298,443.79

Total annual sum available.....\$1,147,861.00

Average of your engineers' estimates of cost of government standard primary road in Utah, per

mile \$12,500.00

×690

Estimated cost to grade and gravel 690 mi. pri-

mary system\$8,625,000.00

Average of your engineers' estimates of cost of government standard secondary road in Utah, per

mile \$ 8,750.00

×994

Estimated cost to grade and gravel 994 mi. second-

ary system\$8,697,500.00

Cost to construct primary system.....\$8,625,000.00

Cost to construct secondary system..... 8,697,500.00

Total cost of Utah's 7% Federal aid system.....\$17,322,500.00

It will be noted that, in figuring the possible ultimate cost of constructing Utah's Federal aid system, no paving at all has been considered, although unquestionably many miles of concrete construction will be built on the state primary system at a cost no doubt in excess of \$25,000.00 per mile. Neither do the above figures take into account the fact that a certain mileage has already been constructed on both primary and secondary systems. However, without considering that paving would increase these figures and existing construction lower them, we find that, if we assume an annual appropriation of \$75,000,000.00 for Federal aid to the states for the coming fifteen years, even that period of time is likely to be inadequate to enable Utah to complete her Federal aid road system.

MANY ROADS MORE IMPORTANT TO UTAH THAN GREAT SALT LAKE DESERT CROSSING

In view of the length of time required to complete the Federal aid system we believe it is a very reasonable assumption that the state would not be inclined to concentrate 50% of its maximum possible yearly road fund for one year on improvement across the Great Salt Lake Desert west of Salt Lake City, a construction which, it has been time and again asserted by leaders in Utah, is not required by the state and which does not tend to serve the state's interests. We submit that on the contrary, due to the urgent demands of other sections of the state, this construction would very likely proceed slowly, by projects, in fact be delayed to as near the end of the fifteen-year period of development as possible.

The improvement we have shown to be required to open the road for thru traffic between Salt Lake City and Wendover is 76 miles. The state forces pushed construction across the desert on the Goodyear Cut-off at the rate of approximately 11 miles a season the first year they were engaged at that work. Therefore, to build the 76 miles required on the Northern Route, even if it were pushed to completion at the same rate of construction progress maintained by the state on the Lincoln Highway crossing of the same desert, under the contract

with the Lincoln Highway Association, would require some seven years.

If, as we have shown, it will take fifteen years to finance the completion of the entire Federal aid system of Utah, then this desert construction would have to be pushed at twice the average speed at which the Federal aid system of the state can be constructed, in order to complete it even in seven years. It will be understood that the desert cannot be crossed by travel until this road is completed.

POSSIBILITIES OF DELAY IN NEVADA

Let us examine the situation in Nevada, where the unavoidable delay in constructing the Wendover to Schellbourne Junction link in the road between Main Forks and Ely will be, if anything, greater than on the Main Forks to Wendover link in Utah.

It will be noted that to open the Nevada section of the Lincoln Highway between Main Forks and Ely requires no construction at all for many years. On the other hand, to open for travel the route from Main Forks by way of Wendover to Ely will require the immediate construction in Nevada of 82.5 miles of hitherto unrequired road at a cost of \$898,507.50, according to the government engineers' estimate. Let us see what position Nevada is in to promptly undertake this, for her, very large expenditure:

Total primary Federal aid mileage allowed Nevada by law—	660.
Total secondary Federal aid mileage allowed Nevada by law—	880.
Out of every \$75,000,000 appropriation Nevada receives	\$953,436.78
To secure this sum, Nevada must appropriate.....	130,014.22
Annual sum available	\$1,083,451.00
Average of your engineers' estimates of cost of government standard primary road in Nevada, per mile	\$12,500.00
	×660
Estimated cost to grade and gravel 660 mi. primary system	\$8,250,000.00

Average of your engineers' estimates of cost of government standard secondary road in Nevada, per mile	\$ 8,750.00
	×880
Estimated cost to grade and gravel 880 mi. secondary system	\$7,700,000.00
Cost to construct primary system.....	\$8,250,000.00
Cost to construct secondary system.....	7,700,000.00
Total cost of Nevada's 7% Federal aid system....	\$15,950,000.00

It will be noted that again no paving has been considered on the primary system, although the state has made plans to do considerable paving near the California line. Again we have disregarded also the existing improvement on the system. The average cost of the 24' primary road based on the government engineers' average cost for 1,000 miles in Utah and Nevada is again used, as is the average estimate on 1,000 miles of secondary construction. It will be noted that to complete the entire Federal aid system in Nevada to even the lowest requirements of the Government, on both primary and secondary systems, will take more than fourteen years, even if we consider a maximum average yearly appropriation by Congress of \$75,000,000.00 as aid to the states.

MANY ROADS MORE IMPORTANT TO NEVADA THAN
WENDOVER TO SCHELLBOURNE JUNCTION

It is hardly necessary to state that Nevada has many hundreds of miles of Federal aid highways to build which are many times more important to the state than the suggested construction between Wendover and Schellbourne Junction. There is not a habitation, not a living soul, to be served by a road along this 82.5 miles. There has never been a road or trail required there. There is no road now designated on the Nevada Federal aid system connecting these points. The only possible reason Nevada would have to add such a road to her Federal aid system would be that, thru acceptance of



A view of the natural trail forming the Lincoln Highway down Antelope Valley, Nevada, to Ely. This stretch is typical of many unconstructed sections of the Lincoln Way in Nevada



From a photo taken in August, 1922, showing Lincoln Highway officials inspecting conditions between Wendover, Utah, and Schellbourne Junction, Nevada. There is no road

Utah's program of a road to Wendover and none to Ibapah, the Government forced such a designation upon Nevada if she wishes to provide any connection whatever with Salt Lake City for the people of central Nevada. While this local travel, as has been pointed out, is relatively unimportant, nevertheless, it is much more important that the people of central Nevada promptly have a road connecting them with Salt Lake City than it is that the people of northern Nevada have such a road, for northern Nevada is connected with Salt Lake City by two direct railroads, while central Nevada, the belt traversed by the Lincoln Highway, has no similar facilities, and **must** depend on the highways.

In any event, the local travel along the Lincoln Highway in central Nevada and between Ely and Salt Lake City is relatively unimportant and very light—that is but another reason why the state would delay as long as possible making the very heavy investment required to build a connecting link for this travel, to Wendover.

Assuming that Nevada were to build this connection for the **thru** travel and undertook it as rapidly as proper consideration for the balance of her Federal aid system made possible, it seems entirely reasonable to assume that at least eight years would be required to complete this improvement. If it could be built in half that time, and the balance of the state would permit funds to be to such a great extent concentrated in an absolutely uninhabited section of the state, that would still be too long a time to delay the opening of any satisfactory road to the coast. If a program permitting such a delay were approved, travel would, as it has for years past, depend upon the Lincoln Highway west of Salt Lake City as long as that desert crossing would remain passable without maintenance.

THE COUNTIES' INFLUENCE ON ROAD BUILDING

To a large extent, in both Utah and Nevada, the funds to meet the Federal aid to build either the Lincoln Highway between Main Forks and Schellbourne

Junction or to build the other suggested connection between Main Forks and Schellbourne Junction, by way of Wendover, must necessarily come from the counties traversed.

TOOELE COUNTY WILL AID LINCOLN WAY ONLY

In Utah both roads are in Tooele County. This county is very large in area and very sparsely populated. The greatest population lies in Rush Valley east of the desert and neither these people nor their county commissioners are anxious to spend any of the county's meager funds on **any** desert road construction. This is only natural. Time and again, however, the people and the county commissioners both have indicated the fact that, if it is essential that county funds be applied to the improvement of a road across the desert, they would prefer to apply them on the Lincoln Highway.

Voters of Tooele County indicated their preference for Lincoln Highway improvement on the desert over the improvement of the Wendover connection by a vote of 5 to 1 on December 3rd, 1921. In the Appendix, as item (C), will be found a resolution from the Tooele County Road Commissioners expressing the county's official desires in this connection.

We almost hesitate to devote space to this attitude of Tooele County. It is so well known that the county will not make funds available to meet Federal aid for the construction of the Wendover road that we are forced to assume that, in urging the construction of this route, the state authorities plan on some special state appropriation to take care of the work and are not leaning on the possibility of county money. It suffices here to call attention to the fact that the county would be willing to levy a .003 tax, which would provide about \$60,000.00 per year, to meet Federal aid to construct the Lincoln Highway link and to complete the contract entered into with the state by this Association in 1918 for the completion of a road from Fisher Pass to the Nevada state line.

THE ATTITUDE OF WHITE PINE AND ELKO COUNTIES

In Nevada, the Lincoln Highway between the Utah line and Schellbourne Junction lies entirely in White

Pine County and while, as has been pointed out, no immediate construction is at all necessary on the length between Ibapah and Schellbourne Junction, nevertheless, White Pine County, one of the most wealthy in the state, is ready at any time to meet Federal aid funds to better this connection when it becomes necessary. The county's attitude towards the improvement of the Lincoln Highway has been evidenced by the rapid progress of improvement with county funds and Federal aid west of Ely.

The suggested link from Wendover to Schellbourne Junction in Nevada lies in Elko and White Pine Counties. While Elko County is even more wealthy than White Pine, we believe that a cursory examination of the strategy of the situation, by a glance at the map, will indicate that Elko County will not be at all anxious to provide county funds to enable the construction of a road from Wendover south, leading out of the county. Such a road south from Wendover would serve not one individual resident of Elko County and would, moreover, if built, be constructed for the sole purpose of leading thru traffic, in which Elko County is extremely interested from a business standpoint, out of the county without traversing a single Elko County community.

Elko County is not likely, we say, to provide funds promptly for the purpose of constructing a now non-existent and locally totally unnecessary road, which would be provided for the sole purpose of delivering tourists and their money into White Pine County.

White Pine County would no doubt provide the funds to build to the Elko County line should this be necessary. More than half the distance is in Elko County.

LINCOLN WAY ONLY PRACTICABLE ROUTE TO ELY

We believe we have demonstrated beyond a doubt that the Lincoln Highway is the route between Main Forks, Utah, and Ely, Nevada, which can be most promptly opened in the interest of through travel. It can be constructed not only years quicker, but hundreds of thousands of dollars cheaper, this being the case whether we consider the completion of both routes en-

tire, to the government standard as shown in your engineers' report, or whether we consider, as we have done in our detailed figures, only the improvement of those sections now necessarily requiring improvement.

COMPARATIVE COST TO COMPLETE TO GOV. STANDARD

The costs of constructing both routes entire to government standard from Main Forks thru to Schellbourne Junction are, as we have pointed out conclusively, of academic interest only, for, in view of the fact that certain sections of both roads are in excellent condition at the present time, the final completion of either road to a government standard will undoubtedly be delayed for years. The present traffic, which deserves consideration, is little concerned with the condition of the road in Utah and Nevada in 1932.

However, it is interesting to consider your engineers' figures on the total cost to complete and to note that even on this basis the Lincoln Highway, Main Forks to Ely, is many thousands of dollars less expensive than the route via Wendover.

The total cost of constructing the 176.2 miles of Lincoln Highway between Main Forks and Schellbourne Junction, utilizing our data for the distances and your engineers' estimates for the cost per mile, is, without salvage, \$1,812,851.60, while the cost of building the 186.1 miles of the alternate route by way of Wendover is, according to their estimates, \$1,729,008.00, without salvage.

The salvage on the Lincoln Highway estimated by your engineers is much the greater, being \$70,000.00 **more** in comparing the value of existing work on the two desert crossings alone. We have not available your engineers' figures representing salvage value of the work on the Lincoln Way in Fisher Pass, Schellbourne Pass, or Rush Valley, but, assuming the Rush Valley salvage on the Lincoln Highway to be equivalent to the salvage between Main Forks and Timpie on the Wendover road, the Lincoln Highway still has the advantage of the salvage value of the entire cost of construction

so far accomplished in both Fisher and Schellbourne Passes, a sum which is certainly over \$50,000. There is no salvage to be considered on the Wendover connection to Schellbourne Junction in Nevada.

DIFFERENCES IN DATA ON MILEAGES AND COSTS

We have heretofore mentioned differences between our figures and those of your engineers in regard to distances. These we have checked carefully and cover more thoroughly later in this Brief, when we take up in detail the comparison of the Lincoln Highway and the Northern Route under the general headings adopted by your engineers for route comparison. Under these headings we will point out also some exceptions we wish to take to the cost figures your engineers have used in connection with improvement work on the Lincoln Highway desert section in Utah, which, if they are sustained by later investigation, will make an even more important and serious difference in the cost of completing the Lincoln Highway and the alternate route to Ely via Wendover—a still greater difference favorable to the Lincoln Way.

It suffices to mention here that we have used, in our foregoing comparisons, your engineers' estimates of cost per mile without alteration. That to some extent your engineers appreciated the error into which they had fallen in figuring the costs on the Lincoln Highway Goodyear Section, as compared with the Wendover road across the Great Salt Lake Desert, is indicated by the alteration in their estimates made after the completion of the original report, whereby an additional sum of \$80,000.00 was added to the estimate of the cost of building section 11 (Knolls to Wendover).

We will demonstrate later why we believe a still larger sum will be required to provide a satisfactory construction across that section of the desert and why the Lincoln Highway can be completed along Government Section 14 (Goodyear Cut-off) for a much smaller sum than your engineers have estimated.

CHAPTER VIII

COMPLETION OF LINCOLN HIGHWAY CONTRACTS WILL OPEN ROUTES TO CALIFORNIA

WE have shown that the route thru Ely is the route of primary importance from a national—a Federal standpoint; from the standpoint of serving the best interest of the “foreign cars”; from the standpoint of those for whom, primarily, the construction of any road will be undertaken. We have shown that the road which can be most quickly and most economically opened to Ely is the Lincoln Highway. We have shown that, even in the ultimate, the completion of the Lincoln Highway to Ely to the Government standard is more economical than the completion, to the same standard, of the Wendover connection. It is relatively unimportant, but we will here mention that the Lincoln Highway from Main Forks to Ely is 9.9 miles shorter than the road via Wendover to Ely.

After demonstrating these exceedingly important points, which have a vital bearing upon the selection of the primary road from Main Forks to Sacramento, we wish here, before proceeding to consider the relative merits of the two roads between Main Forks and Sacramento further, to devote some attention to the important facts which lead us to make the statement, which we now again quote because of its importance—“The completion of **existing** contracts in Utah and Nevada will provide an open and satisfactory route into California from Salt Lake City.”

We mentioned that these existing contracts do not mean a Government standard road. Their completion would mean a great deal to through travel, however, this travel being comparatively uninterested in road specifications, but exceedingly desirous of getting to its destination without difficulty, a consummation which has,

in the past, been devoutly to be wished, but only at intervals possible at all.

OUR NEGOTIATIONS WITH UTAH AND NEVADA

These existing contracts, to which we refer only after having established our case without reference to them, in order to indicate that we argue our position because we believe we are right and not because we believe our investments should be conserved if wrong, necessitate, to be fully understood, a brief history of our negotiations with Utah and Nevada to bring about the correlation of highway construction in the various counties and between the two States. These negotiations have resulted in our contributing considerable sums of money, heretofore unmentioned, based on contracts for road construction. We will outline the development of these road projects and state the present status of each in each state.

THE CONTRACT FOR IMPROVEMENT IN UTAH

We have already pointed out how and why the Lincoln Highway was originally routed west of Salt Lake City across Utah and Nevada with the full approval of then Governor William Spry, of Utah, and then Governor Tasker L. Oddie, of Nevada. We have already mentioned that resolution of the Utah State Highway Commission of March 21st, 1918, which is provided in full in the Appendix (A), and which constitutes a solemn contract between the State of Utah and the Lincoln Highway Association. We here quote from that instrument those sections which expressly enumerate those things that the State of Utah agrees to accomplish in consideration of our payment of \$125,000.00.

“NOW, THEREFORE, BE IT RESOLVED, By the State Road Commission of the State of Utah, in regular meeting assembled, this 21st day of March, 1918, that the offer of \$100,000.00 by the Goodyear Tire and Rubber Company and by Mr. F. A. Seiberling, its President, for the construction of that part of the Lincoln Highway hereinafter particularly described, to-wit:

Commencing at a point in Tooele County, Utah, known as the north end of Granite Point at Granite Mountain; thence in a westerly direction for a distance of approximately $17\frac{1}{2}$ miles, to a point known as Black Point in Tooele County, Utah, which said points are the termini of the shortest distance across what is known as the Great Salt Lake Desert,

be accepted, and a roadway be constructed, not less than eighteen feet in width and not less than one foot in elevation of natural dirt soil, covered with a gravel surface of not less than eight inches in depth at the center, nor less than twelve feet in width, or of greater width if so determined by the State Engineer of Utah upon further investigation; also

“BE IT RESOLVED, That the offer of \$25,000.00 from Mr. Carl G. Fisher for the construction of that portion of the Lincoln Highway from Clover, Tooele County, Utah, toward Orr’s Ranch, via what is known as Johnson Pass, be accepted. Said \$25,000.00 is to be used in constructing a safe mountain highway with double track turnouts, with suitable bridges to be erected where needed, the funds to be applied where most necessary as indicated by said State Road Commission after investigation and recommendation by the State Engineer, said construction to cover a distance as may be determined upon further investigation, but in no case shall said funds be applied on a section or sections, the total construction exceeding six miles in length.

“The condition upon which said money is tendered to the State of Utah, and accepted by it, to be that said road, for the entire distance between Clover, Utah, and the Utah-Nevada State line, via Overland Canyon, shall be designated as a state highway by the State Road Commission on or before the date that construction shall actually begin thereon, the State of Utah first having secured proper right-of-way where such construction is to be made.

“FURTHER, That a road connecting the west terminus of the Seiberling section and the present road

through Overland Canyon shall be opened up and made passable for motor propelled vehicles by the State of Utah; and that a road from Johnson Pass, at the end of the Fisher construction, and west to Granite Mountain, be put in good passable condition for travel, in order to connect the Seiberling-Fisher memorial sections. Also that a connection be made by the State of Utah between the east terminus of the Fisher section and the town of Clover, Utah.

Said work shall be continued and completed not later than the first day of July, 1919.

"FURTHER, Said Seiberling section, after completion, shall be kept closed to all travel until officially dedicated, jointly, by the officials of the State of Utah and of the said Lincoln Highway Association.

In consideration of the construction made by the State of Utah, whereby the Fisher and Seiberling sections are connected with and made a part of the State Highway system of Utah, it is agreed that Mr. F. A. Seiberling shall pay to the State of Utah for the proper upkeep of the Seiberling section such bills for maintenance as the State of Utah shall render, said amount at no time to be in excess of Five Thousand (\$5,000) Dollars per year, nor for a longer period than five years, beginning with the year 1920."

It will be noted that at the time this agreement with the state was entered into and the Association made arrangements for the payment of the money to the state in accordance with its terms, the State Highway Commission of Utah and the Lincoln Highway Association, as well as the people of Tooele County, who had suggested the plan of shortening by using Fisher Pass, were in entire accord. There was no thought on the part of anyone then that the state would not continue and carry out all of the terms of this agreement.

It was thoroughly well understood that the cost of the desert construction between Granite Mountain and Black Point would be more than the \$100,000.00 the Association was supplying for this purpose, just as it was also understood that the Fisher Pass construction would exceed in cost the \$25,000.00 the Association pro-

vided for that work. The Association had endeavored to let contracts for the construction on the desert without success before taking the matter up with the state, and everyone concerned understood thoroughly that the state would necessarily have to provide the difference between the actual cost of both projects and the amount supplied by the Association. This it was naturally very willing to do, for it secured a road which it then officially pointed out as most essential, by providing only a part of the actual cost.

ASSOCIATION FORESAW MORE FEDERAL AID

That some delay might be encountered in finishing those sections which the state agreed to improve between Clover and Fisher Pass, and between Fisher Pass and the north point of Granite Mountain and west of the desert connecting with Overland Canyon, was understood. State and county road funds were very meager and Federal aid in 1918 gave little assistance to the western states.

The Association, however, felt confident that more adequate assistance to the western states from the Federal Treasury was imminent and that before many years the state would be in a position to carry out all of its contract's provisions, even though all that was immediately possible was the completion of the pass and the desert crossing. The important consideration was to **open** the road west; the connections east and west of the desert could wait until more money was forthcoming. These connections were never impassable.

Before the important desert crossing itself was completed, however, the state stopped work, not at any convenient or practicable point in the progress of the job, but in the middle of the season and without any steps whatever to conserve work accomplished.

The Fisher Pass construction was completed. The desert grade was completed from Black Point to Granite Mountain, and seven miles of the grade was properly graveled in accordance with the contract when the work was stopped in September, 1919. Our protests against stopping the work at the point and at the time it was stopped were met with the statement that the common-



This view and the one below show the nature of the excellent road constructed through Fisher Pass by the State of Utah with funds contributed by the Lincoln Highway Association



One of the permanent culverts installed on the new Fisher Pass section of the Lincoln Highway. Very little additional work is required to bring this road to government standard

wealth was completely out of money and could not continue and that the machinery required overhauling and was being brought into Salt Lake City for that purpose. We were assured that the work would be resumed and completed as soon as more money became available and when the machinery was repaired. Note correspondence in Appendix (A) between Governor Bamberger, his State Highway Engineer and Mr. F. A. Seiberling, then President of this Association. There was no hint of a claim that the contract had been fulfilled.

Knowing the very meager highway revenue of Utah, the Association was satisfied with Governor Bamberger's assurances that the work would be continued as soon as the money became available, and waited patiently for the carrying out of this contract.

ADDITIONAL AID OFFERED UTAH REFUSED

The Association felt confident that following the passage of the Federal Highway Act in 1921, which gave the western states a more liberal measure of assistance, Utah would undertake to complete the contract which had been awaiting completion for so many years. It was not until 1922 that the Association was finally advised by a succeeding Utah State Road Commission, under a succeeding Governor, that the contract would not be completed and that the work accomplished would be abandoned. The difficulty the state had in meeting its Federal aid was appreciated and, despite the unsatisfactory way in which our first appropriation was administered, more money was offered by the Association. This was refused.

We maintain that the state is legally and morally bound to complete this work in accordance with the terms of the contract quoted, and in accordance with the mutual understanding of its provisions made clear in the correspondence we have cited. When carried to completion this contract would provide a highly satisfactory improvement between Main Forks and the Nevada state line near Ibapah, as the road is now excellent from Main Forks to Clover. The Association still stands ready to aid the state financially in completing the work

—if the Federal Government's participation assures the proper expenditure of the money and adequate maintenance.

CONTRACTS FOR LINCOLN WAY IMPROVEMENT IN NEVADA

Having as a result of its negotiations with the State of Utah provided for the opening of a satisfactory through highway from Salt Lake City to the Nevada line, the Association turned its attention in 1918 to those secondary problems which became evident once the main problem in Utah was (presumably) taken care of. These problems consisted of the "low spots" in Nevada. As the State of Nevada was urgently desirous of bringing the Lincoln Highway to completion, and as the counties through which the route passed were of a like mind, it became very simple for the state, the county authorities and the Association's representatives to reach a common point of agreement as to where the aid the Association was in a position to extend could best be concentrated to bring about the early opening of a satisfactory route between Ely and the California state line. The road from the Utah line to Ely was satisfactory.

Altogether the sum of \$115,000.00 was offered to the State of Nevada to aid improvement where it would do the most good and to date the following contracts have been closed between the State Highway Department and the Association. In every instance the agreements between the state and Federal government have either been entered into or are pending for the following sections:

CONTRACTS COMPLETED AND UNDER WAY IN NEVADA ON THE LINCOLN HIGHWAY WITH AID FROM THE ASSOCIATION AND THE FEDERAL GOVERNMENT

<i>Project</i>	<i>Length Miles</i>	<i>Estimated Cost</i>	<i>Association's Aid</i>
Hay Ranch to White Pine County Line...	22.0	\$277,258.90	\$ 7,500.00
Westgate to 18 miles west of Austin.....	50.7	430,000.00	44,500.00

Frenchman's Flat	5.0	54,744.03	10,000.00
Grimes Ranch to Sand Springs	17.3	125,000.00	45,500.00
Totals	95.0	\$887,002.93	\$107,500.00

A project involving the remaining \$7,500.00 offered Nevada by the Association is now being considered by our Board of Directors. The project involves the road along Lake Tahoe.

NEVADA MAKING GOOD USE OF ASSOCIATION'S AID

The aid the Association was able to extend to Nevada in connection with the above contracts enabled the early undertaking of many other road improvement contracts between the state and the Federal government, which would not have been possible for several years had not the Association's aid permitted the release of state and county funds for this other work. Thus, by careful and close co-operation between the State Highway Department of Nevada, the Lincoln Highway Association and the many county authorities involved between Ely and Fallon, has been worked out a program which, taking into consideration also the work to be accomplished in the Forest Reserves traversed by the Lincoln Highway, will mean a satisfactory, open, through route across the state in 1924. In nearly every instance the contracts completed or being completed in Nevada are up to the present government standard. In every instance those now uncompleted comprise Federal aid and are being built under the supervision of your Department. The only instance in which this was not the case was in the Toiyabe Forest Reserve, where the road for twelve miles was constructed to the specifications determined upon by the Department of the Interior.

As a consequence of the contracts we have outlined and the condition of the Highway in Nevada as a result of years of gradual improvement, the status of the Lincoln Highway is, as we have said, such that the completion of the existing contracts will provide an open and satisfactory route into California. The following table is provided for convenience in checking our statement

and shows the existing conditions and existing contracts on the Lincoln Highway between Main Forks, Utah, and Sacramento, California. It also serves to indicate the effective co-operation which, for eight years, up to the accession of the present administration in Utah, existed between Utah and Nevada and this Association in advancing the agreed route of the Lincoln Way to completion.

STATUS OF LINCOLN HIGHWAY, MAIN FORKS,
UTAH, TO SACRAMENTO, CAL.,
MARCH 15, 1923

Main Forks to Clover, Utah.....Now good road
Clover to Fisher Pass, Utah.....Contract, March 21st, 1918
Fisher Pass, itself.....Now good road; needs maintenance
Fisher Pass to Granite Mountain.....Contract, March 21st, 1918
Granite Mountain to Black Point (Goodyear Cut-off).....
.....Contract, March 21st, 1918
Black Point to Overland Canyon.....Contract, March 21st, 1918
(Overland Canyon not now under contract,) but—
Black Point via Gold Hill to Ibapah.....Now always passable
Ibapah, Utah, to Ely, Nevada.....Now good road
Ely, Nevada, to Robinson Summit.....Federal aid road built 1921
Robinson Summit to Illipah.....Federal aid road being completed
Illipah to Pancake Summit.....Federal aid road being completed
Pancake Summit to Eureka.....Now always passable
Eureka to Hay Ranch.....Federal aid contract let Nov. 29th, 1922
Hay Ranch to Forest Reserve.....Now good road
Forest Reserve into Austin.....Completed with Federal funds only, in 1920
Austin to New Pass.....Now always passable
New Pass to Eastgate.....Now always passable
Eastgate to Westgate.....Now always passable (ready to let)
Westgate to Frenchman's Flat.....Now good road
Frenchman's Flat.....Completed with Federal aid in 1922
Frenchman's Flat to Sand Springs.....Now good road
Sand Springs to Salt Wells.....Completed with Federal aid in 1922
Salt Wells to Grimes Ranch.....Contract being completed with Federal aid
Grimes Ranch to Fallon.....
.....One-half under contract (Dec. 27th, 1922) now always passable
Fallon to Leeteville.....Completed with Federal aid in 1920
Leeteville to Carson City.....Always passable—but rough

ALTERNATE VIA RENO TO CARSON

Leeteville to Hazen.....Completed with Federal aid in 1922
Hazen to Fernley.....Now under construction with Federal aid
Fernley to Reno.....Now always passable
Reno to Carson.....Concrete paving completed in 1922
Carson City to state line.....Good graded road
State line to Placerville, Cal.....Good graded road
Placerville to Sacramento.....Paved



The above photo, taken in 1915, shows the old "road" across the Fallon Sink, Nevada. This Sink is an old lake bottom like the Great Salt Lake Desert in Utah



A view of the excellent, graded, well-drained road across the Fallon Sink completed by the State of Nevada in 1922, with the aid of the Lincoln Highway Association

We stated that the completion of existing contracts on the Lincoln Highway would open a satisfactory route into California. We have demonstrated that the completion of existing contracts will open a satisfactory route into Sacramento. Their completion opens a satisfactory route also into southern California, for there is no situation in any way impeding the passage of through traffic between Ely, Nevada, and Tonopah, Goldfield or Oasis. The State of California has completed a splendid road between Los Angeles and Mojave, and, while it has not yet been paved from Mojave to Oasis, no difficulty is ever encountered on this road and it is in generally excellent condition, as such western trails go. By this we mean sometimes rough, but never impassable. There are long stretches of fast going.

OUR BEST EFFORTS HAVE SO FAR BEEN UNSUCCESSFUL

The Lincoln Highway Association has the greatest regret that it has failed to accomplish or procure, before this, the construction of a road connecting Salt Lake City with both northern and southern California. That this end has not been accomplished is no fault of this Association and no fault of the State of Nevada, as the status of existing contracts makes clear. Nevada has seen the broad picture from the first and done the best it could, with meager funds, to aid in working it out. Nevada appreciated, long before any Federal law necessitated the designation of a "primary" and "secondary" system of highways, that the Lincoln Highway west of Ely was destined to be the most important east and west road across Nevada, for the reason that the strategy of that choice of location would bring to it all travel into northern California. It is for this reason that the Lincoln Highway is so far advanced today over the Northern Route in Nevada. We refer you here to the complete text of the joint resolution passed by the legislature of Nevada on Feb. 5, 1923, given in the Appendix (D). This joint resolution refers, in one paragraph, to an earlier request of the State of Nevada, voiced through Ex-Governor Boyle, when it says:

"WHEREAS, in April, 1922, the Governor of Nevada, the Department of Highways and over thirty

*Chambers of Commerce, Boards of County Commissioners, and other civil and civic bodies joined in a request to the State of Utah that it include the Lincoln Highway in western Utah in its Federal highway system, and said request was ignored; * * **

While the complete "request to the State of Utah," signed by the Governor of Nevada, the Department of Highways, the Chambers of Commerce and other bodies mentioned, will be found in the Appendix as item "E," the purpose here is to quote only that portion which serves to impress again the importance which the State of Nevada, the Department of Highways, the Governor and the people, as represented by their commercial and civic organizations, place upon the Lincoln Highway.

THE IMPORTANCE OF THE LINCOLN WAY TO NEVADA

"WHEREAS, the program for Federal aid heretofore submitted by Utah does not provide the most direct avenue possible to a very large number of cities and towns in central Nevada, localities which, thru lack of transcontinental railways, must depend on highways for east and west communications; and

"WHEREAS, the Lincoln Highway is the main correlating highway across Nevada, directly serving such important communities as McGill, East Ely, Ely, Ruth, Kimberly, Hamilton, Eureka, Austin, Fallon, Hazen, Reno, Carson City and Lake Tahoe, and also forming direct connection by improved highways with Pioche, Lund, Preston, Tonopah, Goldfield, Hawthorne, Yerington, Minden, Virginia City, Gold Hill and Dayton, thereby serving about 90 per cent of the population and business interests of Nevada; and also serving Gold Hill and Ibapah, in Utah and the Yosemite and Owens River valleys in California; and

"WHEREAS, the only western outlet which Utah has heretofore designated will not provide a direct connection with the Lincoln Highway route across Nevada; and

"WHEREAS, Nevada has designated the Lincoln Highway route for Federal aid; and

“WHEREAS, the business prosperity of central Nevada depends largely on securing direct communication with Salt Lake City, thereby more closely cementing the business relations of Nevada and Utah; and (etc.)—”

Nevada, as has been shown, has done her best, not only to get the Lincoln Highway improved across 500 miles of sparsely populated territory within her own borders, but also to bring about the co-operation of the State of Utah in making what she had accomplished of correlative value. We have done our best to assist both states to open, under the great difficulties which have existed, at least one through connecting route into California. We would have succeeded long ere this had it not been for the conflicting interests of trade in the large areas affected by route improvement in the west in the manner we have pointed out. (See also Appendix, F.)

GOVERNMENT CAN NOW BRING PROGRESS OUT OF STAGNATION

We are now thankful that the matter has progressed to a stage where the Federal government authority, empowered to decide the route with equitable consideration of the diverse interests of the areas affected, will rapidly bring progress out of stagnation.

The power and authority of the Federal government to control and co-ordinate the main arterial highways has been and will be invaluable through the years, to a degree almost impossible to visualize today. In the past it has required county authority to decide differences between individuals, urging the construction of differing routes of travel serving their respective interests. It has required state authority to compel the co-operation of counties in providing inter-county roads of state-wide importance. The national government authority is now required to bring wise action out of dispute as to the proper routes correlating main highways between states and providing arteries of national importance.

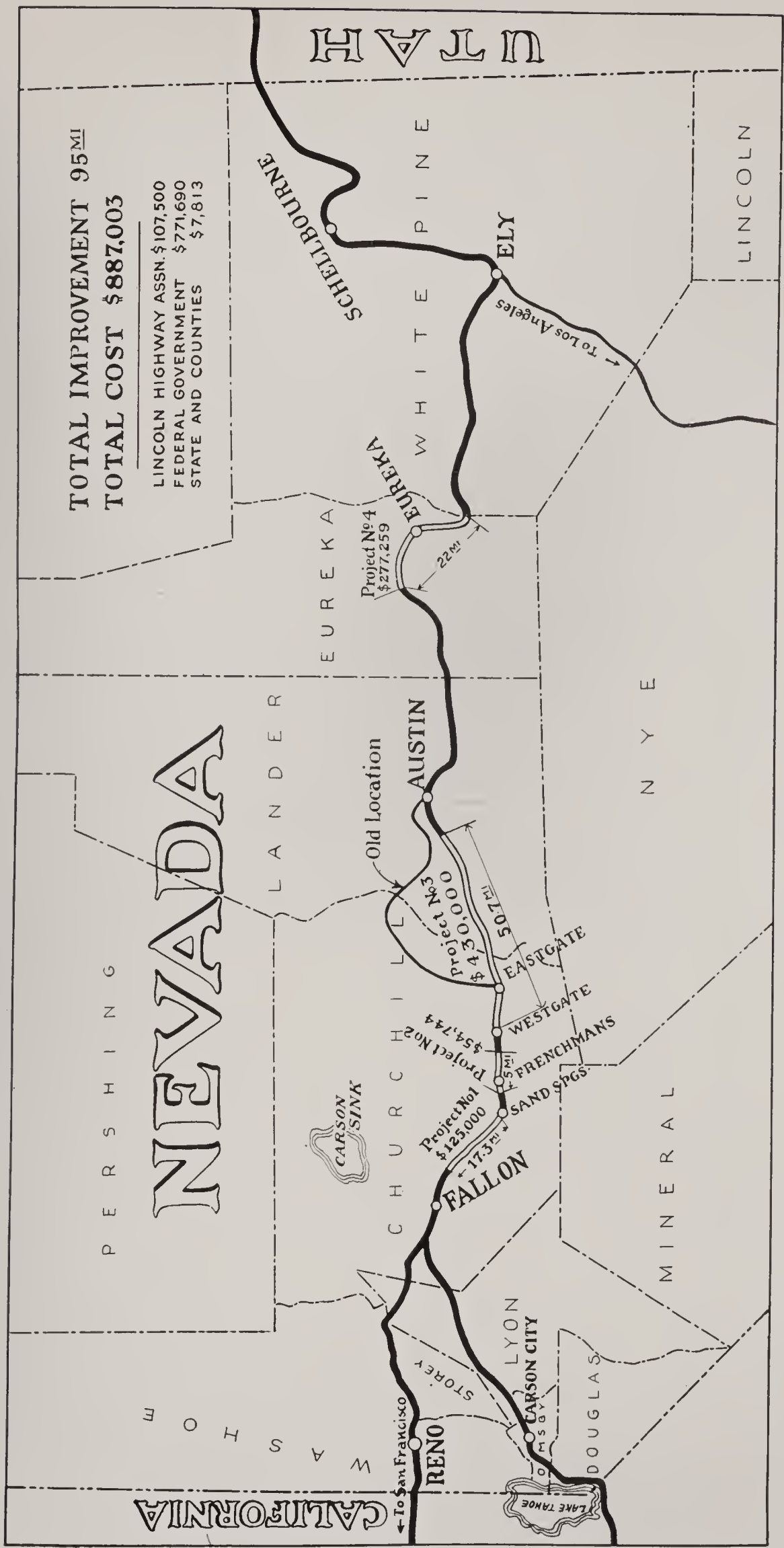
The Lincoln Highway Association has labored strenuously since its organization to bring about the establish-

ment of this vital co-ordinating power over the main roads, in the hands of the Federal government. It was one of the first advocates of Federal supervision and control of main highway selection and construction. The Association now welcomes and hails with relief the opportunity of placing its burdensome efforts at road co-ordination in the Far West, where the conflicting interests of vast areas would serve their own sectional interests at the expense of the welfare of the thru travelers, upon a Governmental Department, selected, established and empowered by Congress for that purpose.

Our sincere hope is that the light we have gained on this western situation, through more than ten years of study and investigation, may, at this crucial time, prove of value in guiding the decision of your Department. We look hopefully forward to rapid progress in completing the only missing link in the most important of all transcontinental roads. We have implicit confidence that the final decision by your Department will be made in accordance with the sound, basic principles of the logical and wisely strategic routing, which seem so clear to this Association after ten years of study.

SERVING AMERICA BEST

This Association feels that, while the vast area involved permits of many route locations differing in detail, no other location of route than that it has urged will better serve the great motoring public of the country. We feel most sure that any other route selected for first improvement as a link in the main through path of traffic flow to California, would result merely in serving better the interests of certain areas at the expense of certain others, while less advantageously serving the interests of those who should first be considered—the touring public, “Seeing America First,” which is 90 per cent of the travel and which pays 75 per cent of the cost of the road construction.



Where the Lincoln Highway Association has helped and is helping the State of Nevada to promptly bring the Lincoln Highway into proper condition. The shortening made possible by the new route between Austin and Eastgate is clearly indicated

CHAPTER IX

WHAT HAS BEEN PROVEN?

WE believe that we have demonstrated: First, that the road most important to open first for the through travel between Main Forks, Utah, and Sacramento, California, and between Salt Lake City and Los Angeles, is the route by way of Ely, Nevada. Second, that the route by way of Ely, Nevada, can be most quickly put in thoroughly travelable condition to serve the waiting traffic. Third, that of the two possible routes to Ely from Main Forks, the Lincoln Highway can be most economically opened and most quickly opened, and would, from every standpoint, best serve the traffic, not only in the immediate future, but for all time, being shorter and safer, following the natural topography and traversing the region dotted with towns and ranches and being, moreover, a route which Nevada wants and which for a long time would cost her nothing, as compared with the necessary immediate outlay of nearly \$900,000.00 in Nevada if the other route, via Wendover to Ely, were undertaken.

Thus, we believe we have demonstrated, without entering into a detailed mile-by-mile and section-by-section comparison of the two routes between Main Forks and Sacramento, that the Lincoln Highway between these two points is the most important, correlating road; that it should be the highway of primary importance, whether so designated or not technically being of no consequence, and that it should be opened first!

NO IMMEDIATE NEED FOR ROAD FROM MAIN FORKS TO WELLS

It has become evident by now that, in our consideration of the problem, we have devoted no attention to the necessity of building a connection from Wells, the east

terminus of the Northern Route across Nevada which we have stated would ultimately certainly be built anyhow, to Main Forks and Salt Lake City.

It is true we have devoted no attention to this matter. We consider it of minor importance. We assumed that, primarily, your Department and the Highway Departments of Utah and Nevada are interested, in connection with this whole problem, in providing a satisfactory through route for the tourist traffic heading west. We have considered the problem from that standpoint, believing that the question of providing for the admittedly insignificant local travel is not the question which has brought this controversy into being and necessitated such an amount of consideration and investigation by your Department.

We do not deny that the local travel, such as it is, along the line across northern Nevada, should be served. In fact, we have pointed out the necessity for the construction of this road from Wells to Reno. We have disregarded only, as unessential, any prompt provision for a connection between Wells and Main Forks. There is no such connection now; there has never been such a connection. It is reasonable to assume, therefore, that there is not a very great local need for such a connection and that the widespread demand which has been stimulated for the improvement of this link has nothing whatever to do with the local travel, but results entirely from the very logical and praiseworthy desire on the part of the people between Wells and Reno to benefit from the through travel which would be debouched upon them, should the link from Main Forks to Wells be built and the Lincoln Highway abandoned.

This demand from the communities of northern Nevada has been strengthened, if it has not been led, by a still greater demand from northern California, which region fully appreciates that the construction of this link and the abandonment of the Lincoln Highway to Ely would mean a tremendous increase in the through travel poured into northern California. Why? Because northern California would then get even that travel heading for Los Angeles which preferred the long way around to the Mohave Desert trip.

THE LOCAL TRAVEL OF NORTHERN NEVADA

Such few of the tributary population of 15,492 along the Northern Route in Nevada as may necessarily have to reach Salt Lake City can do so by the same avenues of travel they have been using in the past. These avenues are, in the order of their importance: First, the railroads, which would be used in any event by 99 per cent of the residents of northern Nevada desiring to reach Salt Lake City. Second, the rough, through trails existing and traveled by them for years via Wells, Montello, Snowville and Brigham to Ogden and Salt Lake City, or, at certain times of the year, directly through from Wendover across the salt flats when they are dry. Third, the still better and more traveled natural trails connecting Wendover with Black Point on the Lincoln Highway.

We do not contend that a Federal aid connection will not some day be necessary between Wells and Main Forks by way of Wendover. We contend that this connection is by no means of primary, present-day importance for the thru travel or even for the local travel. We contend that if any route is to be put off for later consideration, this is the one which can, with the least detriment to the greatest number, be postponed. If the Lincoln Highway is built it is obvious that it will be many years before the volume of local travel from northern Nevada to Salt Lake City would justify the expenditure of \$1,099,724.00, as per your engineers' estimates, for its accommodation.

Who can say what will develop in the way of additional western highways in another generation—in the course of the next twenty or thirty years? This area, as we have pointed out, is an area equivalent to the combined area of France and Belgium, an area involving 230,000 square miles, which, we maintain, cannot forever be served by one road, however carefully located.

BOTH ROADS MAY SOME DAY BE REQUIRED

Our vision entirely lacks the ability to see the wisdom or practicability of the suggested effort to make one road render double service, in the planning of a great national system, the construction of which will be the work

of years. Why draw together the two, natural, main roads across Nevada to a common point at Wendover? This involves, as stated in the engineering report, the building of a road 82.5 miles in length from Wendover to a junction with the Lincoln Highway, southwest of Schellbourne, in Steptoe Valley, along which there does not now live one soul; not a human being.

The real need, in the ultimate, is for two main roads from Main Forks, Utah, to Sacramento, California, and no doubt two ultimately will develop. Certainly, that is what the State of Nevada has been urging so strenuously upon the State of Utah, i. e., provision for the ultimate construction of two routes to adequately serve the vast areas, in southern, central and northern Nevada and southern Idaho, involved.

From Boise, Idaho, to Needles, California, is a distance of 600 miles, north and south. This is the area which, as your engineers state the problem, it is proposed to adequately serve with but one road in western Utah; this endeavor being for the purpose of saving, in the ultimate, the construction of 89.4 miles (your engineers' figures) during the fifteen-year development of a Federal Highway System of 180,000 miles. The plan developed to effect this relatively minute saving requires the building of a highway where a majority of the traffic does not want to go, and involves the construction of 82.5 miles of highway (Wendover to Schellbourne Junction) which heretofore has never been needed and where no traffic has ever wanted to go.

IMPORTANCE OF RIGHT ROUTE SELECTION NOW

A great national system of roads is now being formulated to adequately provide transportation facilities to an area of over 3,000,000 square miles. Primarily, the aim is not to determine where the greatest saving in mileage or money will result by the location of routes, particularly in the areas where the roadways are built largely from the Federal Treasury, but, on the contrary, to determine upon those main, backbone highways which will be necessary always to the travel of a nation.

As Mr. Thomas H. MacDonald, Chief of the Bureau of Public Roads, has so well pointed out to his District Engineers, the work of the present organization of his Bureau is of greater importance than the work to be accomplished by any succeeding organization. It is of basic importance, for it lays out the work to be accomplished by future generations of highway builders. It determines the broad strategy of route selection, while later organizations, both Federal and state, will have to do, largely, only the physical constructive effort along the lines now pointed out.

Much of the comparative data presented in the engineering report for your consideration is of no real consequence to the existing problem, for, as we have endeavored to point out, ultimately in the development of this great fundamental system of American highways, both of these routes will be built. Both should now be included in the Federal aid system adopted as the task for later years to complete. But the road of major importance to the bulk of today's travel should be first attacked and its difficulties overcome. And that road is the Lincoln Highway.

THE LOCAL TRAVEL OF CENTRAL NEVADA

If we are going to devote consideration to the local travel, it is far better to let the few individuals in the territory served by the Northern Route in Nevada rely upon the existing railroad lines to reach Salt Lake City than it is to expect the local travel developed by the larger population served by the Lincoln Highway across central Nevada, to reach Salt Lake City over theoretical highway construction, which, we have pointed out, will be delayed in development for many years.

The travel from central Nevada, desiring to reach Salt Lake City, has always followed the Lincoln Highway and will continue to do so even if the link in western Utah is abandoned and the repudiation of our contract with that state is permitted by the Government, until such time as the Goodyear Cut-off across the desert becomes entirely impassable. After that, during the years which must elapse until the Schellbourne Junction to Wendover road is built in Nevada and the Wendover

to Timpie road is built in Utah, this travel will have no way of reaching Salt Lake City other than over a much longer, extremely impracticable and difficult route, via Fish Springs, around the south edge of the Great Salt Lake Desert. This travel has no railroad to fall back upon.

CHAPTER X

THE ENGINEERING REPORT

WE have at various points in our Brief made reference to differences between our data and that presented to you in the report of the engineers of the western district. We stated that we believed it unnecessary to comment upon these differences in detail during the development of our case, as the importance of these differences was so far overshadowed by the basic differences in assumptions and premise. We stated that after developing our Brief in behalf of the Lincoln Highway's designation and completion we would return to incidental consideration of your engineers' report and a categorical presentation of some of the more essential differences which have developed between the data presented therein and that we have painstakingly gathered.

ONLY IMPORTANT DIFFERENCES TO BE SHOWN

We have determined to make these comments on the report now before you for consideration, under the headings used in that report, in order to enable you, or any other student of this problem, to readily refer back and forth from the engineers' statements to ours. We well realize how much more easy it is to tear down the careful and painstaking work of others than it is to develop a constructive argument, and we will, therefore, carefully guard our criticism and voice only such part of it as we believe has an important bearing on the consideration of the case. Points upon which we may differ in minor degree only we will entirely omit from mention. We are not attacking the report, but only endeavoring to shed the light of our experience upon its essential statements.

In order that it may not with reason be asked why we did not bring up these differences at the time we were courteously given an opportunity to discuss possible differences with your engineers, we must explain that it

has required weeks of careful study of the engineers' figures and consideration and comparison of our own data with them to develop the differences, which were not apparent from the brief inspection made while our officials were in Washington.

There follows herewith the results of a very comprehensive, detailed study of the engineering report.

"NEVADA-UTAH ROUTE STUDY"

"I. THE PROBLEM"

Our basic difference with your engineers' statement of the problem has been elaborately explained. This difference is more important than any others that can develop, as it is fundamental and affects the importance of all their appended data.

"II. GEOLOGICAL AND HISTORICAL SKETCH"

This data is interesting and correct. It has no bearing on the problem.

"III. COMPARISON OF NORTH AND SOUTH ROUTES"

"1. DISTANCES"

Our facts differ materially from many of the statements of distance made in the engineering report. A consistent difference between two sets of figures made by logging routes with different cars and different speedometers would be of no consequence. We refer to wide variations in distance, sometimes one way and sometimes the other, which cannot be attributed to this cause. It is worth noting that our differences indicate inaccuracies in the figures of the engineering report showing distances along the Northern Route which are favorable to the proponents of that Route; while the differences between our figures and those of the engineering report showing distances along the Lincoln Highway are unfavorable to the proponents of that route.

COMPARATIVE TABLE SHOWING MILEAGE DIFFERENCES

We present here a table showing the distances given by your engineers and our best data as to the distances between the same points on both routes, together with notes explaining our figures.

THE NORTHERN ROUTE
(All Figures Refer to Distance in Miles)

Road	Engrs.	Ours	
Main Forks-Knolls	63.30	63.30	probably correct; our reading, 64.20.
Knolls-Wendover	40.30	40.30	checks with us.
Wendover-Wells	65.50	65.50	new route; have not measured it; old route, 70.4.
Wells-Halleck	31.10	31.10	same as R. R.; our reading, 34.9.
Halleck-Carlin	43.44	44.30	new state construction; our reading, 44.3.
Carlin-Dunphy	30.63	30.63	new location; no data. To Dunphy ranch, via Maggie Creek, 32.8.
Dunphy-Battle Mt.	20.00	25.90	is our reading.
Battle Mt.-Winnemucca..	56.06	61.30	is our reading over new state construction most of way; S. P. and W. P. R. R.'s each 59; through swamp land.
Winnemucca-Mill City...	29.00	29.60	is our reading. New location follows old road.
Mill City-Lovelocks.....	44.50	45.60	is our reading; new completed state road.
Lovelocks-Wadsworth ...	64.00	64.00	new location; we have no data.
Total to Wadsworth...	487.83	501.53	
Our Total		501.53	
Engineers' Total		487.83	
Difference involved		13.70	
Wadsworth-Sacramento	180.2		is our log.
Main Forks-Sacramento, Total....	681.73		

THE LINCOLN HIGHWAY

Road	Engrs.	Ours	
Main Forks-Granite Mt...	79.1	79.1	new location; no data; present trails, 80.0; can be shortened.
Granite Mt.-Black Pt....	20.3	20.3	checks with us.
Black Pt.-State Line.....	30.9	27.1	Utah survey, via Overland, shows this can be made in less than 27.1.
State Line-Tippett.....	19.2	19.0	is the old trail, running around obstructions; this should be materially reduced.
Tippett-Anderson's	20.2	19.3	is present road; no reason for lengthening.
Anderson's-Schel. Summit.	5.9	5.9	this is 0.9 longer than present route; O. K.
Schel. Sum-Schel. Jct....	5.4	5.4	tho Nevada survey indicates 5.1.
Schel. Jct.-Ely	38.1	37.1	is shown elsewhere in engineers' report.
Ely-Pancake Summit.....	59.0	55.18	state's survey.
Pancake-Eureka	17.3	17.3	new location; have no data.
Eureka-Forest Reserve....	61.2	60.3	is trail distance, which should be shortened.
Forest Reserve-Austin ...	12.8	11.96	is present road, with 6% max. grade.
Austin-Campbell	35.6	35.6	have no data via this new location.
Campbell-Eastgate	17.6	17.6	have no data via this new location.
Eastgate-Grimes	47.1	45.9	is present; this should be reduced.
	469.7	457.04	
Grimes to Wadsworth....	40.2	40.20	(for purpose of comparison to Wadsworth).
Total to Wadsworth.....	509.9	497.24	
Engineers' Total		509.9	
Our Total		497.24	
Difference involved		12.66	
Engineering Report total Lincoln Way to Wadsworth		509.90	
Engineering Report total Northern Route to Wadsworth		487.83	
Indicating as saving via Northern Route		22.07	
Our total, Northern Route to Wadsworth		501.53	
Our total, Lincoln Way to Wadsworth.....		497.24	
Indicating as saving via Lincoln Way.....		4.29	
Road	Ours		
Total, Main Forks to Grimes....	457.04		
Grimes-Leeteville	18.0		which will probably be made 15.0.
Leeteville-Carson	57.9		now, which should be shortened 5%.
Carson-Sacramento	136.6		probably little change can be made.
Main Forks-Sacramento, Total..	669.54		
Main Forks-Sacramento, via Northern Route		681.73	
Main Forks-Sacramento, via Lincoln Highway		669.54	
Saving via Lincoln Highway.....		12.19 miles	

COMMENTS ON MILEAGE DIFFERENCES NOTED

We provide herewith detailed explanatory comments on the mileage differences indicated in the foregoing table.

THE NORTHERN ROUTE

Main Forks to Knolls: Our figures are slightly in excess of those in the report, but we accept its figures.

Knolls to Wendover: We check exactly with the engineers.

Wendover to Wells: We have never traveled the route proposed, which we understand is entirely different from any heretofore used—hence we have no figures to check against. The old route we measured was 5.1 miles longer than the figures shown.

Wells to Halleck: Our measurement is 3.8 miles longer than that shown by the report. Our measurements were made on what we understood was the permanent route, but as changes may be contemplated we do not desire to dispute these figures.

Halleck to Carlin: We understand this road is completed; new construction by the State of Nevada. We measured the route in 1922 and our measurement was 44.3 as against 43.44 shown by the report.

Carlin to Dunphy: This is a new location on which we have no data. If the route is to run via Maggie Creek, our measurement to the Dunphy Ranch is 32.8 as against 30.63 shown by the Federal engineers; however, we do not dispute the report's measurement.

Dunphy to Battle Mountain: We logged this section from the point on the south side of the river where the road from Dunphy ranch, via the new bridge, will join the present road, because that is as near to Dunphy as it is possible to get by motor. We allow 1.5 miles as the distance between Dunphy ranch and the point from which we logged. With this allowance, which is fair, we find the distance to be 25.9 miles. As this is through a very swampy country and the route we followed travels as closely as possible to the swamp land, we do not see how it can be shortened by anywhere near the amount shown by the engineers.

Battle Mountain to Winnemucca: The report shows as 56.06 miles; a large part of this is over new construction which we measured in 1922 and found to be 61.3 miles; this is through a low, swampy country where it would hardly seem feasible to construct a grade directly in a straight line through the swamp; the Southern Pacific and Western Pacific railroads followed this course—that is, built in an air line through the swamp land. According to the best data we can find, each of them makes the distance 59 miles. We, there-

fore, believe that our measurement of 61.3 miles is more nearly accurate than that shown by the report.

Winnemucca to Mill City: We followed the proposed location of the ultimate road and made the distance 29.6 as against 29.0, shown by the report.

Mill City to Lovelocks: This section was practically completed as a new state highway, built with Federal aid, when our log was made in 1922; the report shows this distance as 44.5, our measurement was 45.6 miles.

Lovelocks to Wadsworth: This road is in a new location, we understand; we do not question the report's mileage.

The differences we have noted make our measurement between Main Forks and Wadsworth, via the Northern Route, 501.53 miles as against 487.83 miles, shown by the engineers' report; adding 180.2 as the mileage which our records show to be the correct distance between Wadsworth and Sacramento via Reno, we make the distance between Main Forks and Sacramento, via the Northern Route, 681.73 miles.

THE LINCOLN HIGHWAY

Main Forks to Granite Mountain: The engineers' report shows the distance as 79.1 miles; the present route we find to be exactly 80 miles, or .9 of a mile longer than that shown by the report. More than half of the present road is nothing but the old trail on which not a foot of construction has ever been made. This trail winds around sandy spots, washes and other natural obstructions, in whatever appeared to be the most convenient manner. While we believe this distance should be very materially shortened, when new construction is undertaken, we use the mileage given in the report in our table.

Granite Mountain to Black Point: The report checks exactly with us.

Black Point to State Line: The engineers show 30.9 miles; we believe this distance should not exceed 27.1 miles. In fact, we believe even the latter figure should be materially reduced. In support of this we call attention to the fact that the engineers measured by way of Gold Hill, which is not the shortest and best location; this has been acknowledged by the State of Utah, which contracted to construct a road from Black Point directly to Overland Canyon. The state made a survey connecting Black Point with the present road in Overland Canyon. The route through Overland Canyon is the State Highway. (See Utah State Highway Map).

State Line to Tippet: The report shows 19.2 miles as the distance; the old trail leading between these two points,

which was used for a great many years and which is still used to a certain extent and which winds around washes, following the contours of arroyos, running around sand ridges, etc., is 19 miles even; this distance should be materially reduced, particularly in Antelope Valley, when a raised grade is built.

Tippett to Anderson's: The report shows the distance as 20.2 miles; the present road is 19.3 miles; we see no reason why additional distance should be necessary on this stretch, as there are no heavy grades where distance would need to be added in order to develop the maximum allowed by your regulations.

Anderson's to Schellbourne Summit: The engineers add .9 of a mile to the present route, which is 5 miles even; as some grade must be developed in the last one-half or three-quarters of a mile to the summit, we use their figure.

Schellbourne Summit to Schellbourne Junction: The report shows the distance here as 5.4 miles on a new location on which we have no data.

Schellbourne Junction to Ely: The report shows 38.1 miles; in this instance the engineers have erroneously added one mile to their own figures, as will be noted by referring to "Section III, Subhead I"; under this division the report shows 16 sections of the route between Main Forks and Ely; among them, Schellbourne Junction to McGill—24.1 miles; McGill to Ely—13 miles—a total of 37.1 miles, which is the correct distance.

Ely to Pancake Summit: The report shows 59.0; this route has all been surveyed by the state engineers. They divided it into five sections; the total of their surveys for these five sections is 55.18, which we believe is more nearly correct than the mileage shown by the report.

Pancake Summit to Eureka: The report shows 17.3 miles; we understand this is a new location which we have never measured and hence have no data; therefore we use this figure.

Eureka to the Forest Reserve: The report shows 61.2 miles; the present distance is 60.3 miles, which we believe is more nearly correct. Inasmuch as most of this road lies through a flat country, is nothing but old natural trail, laid out so as to take advantage of natural configuration, water-holes, etc., we believe the distance of 60.3 miles should be very materially shortened, but we have used the present figure in our table.

Forest Reserve to Austin: The report shows the distance as 12.8 miles; this road was constructed in 1920 by the Forest Reserve forces, whose survey of it shows 11.96 miles. There are three or four curves which are too sharp, but as the maximum grade is 6% we see no reason why nearly a mile should

be added to this distance; in fact, we believe no added distance is necessary to give better radius to the curves.

Austin to Eastgate: This is a new location over Carroll Summit. We have no data and therefore use the mileage given by the report.

Eastgate to Grimes: The report shows 47.1 miles; the present measurement is 45.9 miles. This route is quite definitely fixed, as several hundred thousand dollars, including Federal aid, have already been expended in construction over the most difficult sections, which would have to be abandoned to lengthen it; the balance is mainly in flat country, there is not a grade which comes anywhere near the maximum fixed by your Department and what is not already constructed is old desert trail, which is always longer than is an engineered road. Therefore, we think 45.9 miles should be the maximum figure used for this section.

MILEAGE DIFFERENCE FAVORS LINCOLN HIGHWAY

Our mileage figures between Main Forks and Grimes Ranch total 457.04 miles; the report gives the distance between Grimes Ranch and Wadsworth as 40.2 miles, which shows a total distance of 497.24 miles; this is 4.29 miles shorter than the distance we figure the Northern Route to be, instead of 22 miles longer, as the report indicates—in other words, we differ 26.3 from the report in total measurements, even while omitting any differences in regard to which we are in any way in doubt, and giving the report of the engineers the benefit of the doubt.

Now, taking Sacramento as our checking point, and taking our measurement from Main Forks to Grimes as 457.04 miles, we add 18 miles as the distance from Grimes to Leeteville, this being the maximum which has ever been shown (we believe this will be reduced approximately three miles). From Leeteville to Carson the present distance is 57.9 miles, which we use in our table, although this should be shortened approximately 5 per cent; from Carson to Sacramento the distance now is 136.6 miles, which will probably be changed but very little; thus we arrive at a total distance between Main Forks and Sacramento of 669.54 miles, as against our computation of the Northern Route's distance between the same points, of 681.73 miles, or a difference of 12.19 miles in favor of the Lincoln Highway.

This question of relative distance is not of primary importance at all, although stressed in your engineers' report. That is to say, a difference of 2 per cent is immaterial, but what difference there is, favors the Lincoln Highway.

"2. STATUS OF FEDERAL AID PROJECTS"

The engineering report shows under this heading that both routes between Main Forks, Utah, and Wadsworth, Nevada, are progressing at about the same rate toward completion with Federal aid in Nevada, and that no Federal aid has been allowed on either route in Utah. The status of this consideration remains about the same if the western terminus is moved to Sacramento. Both routes from the Nevada state line to Sacramento, in California, are on the state's Federal aid system. It is immaterial to a consideration of the problem which route may at the moment have more Federal aid projects under agreement.

The Lincoln Highway from Leeteville to Carson City, Nevada, is not on the State Federal aid system. The importance of this route, as indicated in our previously presented data, dictates its inclusion in the Federal aid system. Like many other roads in Nevada, it has been left off the Federal aid system because the state's Federal aid mileage does not permit the inclusion of all roads of importance in the Federal system. We submit, however, that it is more important that this route (57.9 mi.) be on the Federal aid system of Nevada than it is that the road from Ely to Pioche should be on the Federal aid system or that the road from Wendover to Schellbourne Junction (82.5 mi.) should be included.

"3. POPULATION, VALUATION AND TRAFFIC"

We have no important comments to make on this section of the engineering report other than to again mention the fact that the relative population along these two routes and the relative physical valuation have very little to do with the problem, for two reasons. First, that the through traffic is not interested in traversing a region because it may have slightly the preponderance of popu-

lation, or because its valuation is greater. Second, because both routes are going to be built anyhow west of Wells and west of Ely, and the comparison of population in Nevada, therefore, is immaterial as is a comparison of the relative valuation.

The only thought which your engineers' figures in connection with this subject have brought to mind is that the railroads, of course, are responsible for the great excess of assessed valuation along the Northern Route. Here is a belt of country the development of which has long been stimulated by the existence of these railroads. One would naturally suppose that the population in this belt would therefore be greater than in another belt of approximately equal area without railroad facilities. Your report's examination of the relative population figures in Nevada, however, shows that the population along the Lincoln Highway is greater than along the Northern Route. This seems to indicate that the central belt would, if it had a railroad, or if it had the advantage of a through connecting motor road, develop a very much larger population and prosperity than has been developed during fifty years along the Southern Pacific and Western Pacific railroads in northern Nevada.

"TRAFFIC"

It is under this head that the engineering report speaks of traffic to Los Angeles and dismisses the interests of this traffic with a brief reference to the Arrowhead Trail as being the road which was carrying most of the traffic to Los Angeles anyhow and not the Midland Trail from Ely. Under this head also your engineers state that the local traffic on both routes is negligible, a point we have impressed. The report states that the local traffic is now slightly greater on the Northern Route in Nevada than on the Lincoln Highway and "slightly greater on the Lincoln Highway in Utah than on the Northern Route." Inasmuch as there is no local traffic whatsoever beyond Grantsville on the Northern Route in Utah, this latter statement can be looked upon as conservative.

Under this head, the engineering report points out that the inconsequential local traffic along the Lincoln Highway in Nevada will be given "an adequate connec-

tion" with Salt Lake City via Ely-Schellbourne Junction-Wendover. It adds that the through traffic is not expected to follow this road. The extravagance of expending in Nevada close to \$900,000.00 to build a new road between Schellbourne Junction and Wendover to serve the "inconsequential" local traffic only, is not touched upon.

"4. WATER AND SUPPLIES AVAILABLE"

The engineering report states that water is available at intervals of sufficient frequency on both routes, and that supplies and garage facilities will follow the travel. We agree that this assumption is correct, with the exception of along the proposed construction between Wendover and Schellbourne Junction. We are not inclined to believe that any stations designed to serve through traffic will be developed along this 88.6 miles of uninhabited route. Through traffic is not heavy enough during June, July, August, September and October to warrant the establishment of stations for the sole purpose of catering to it and the local traffic at all times would be too light to support such stations.

The only stations which have developed to serve the traffic along any of the main routes in the West under consideration, have resulted from existing ranches or communities supplying service to the traffic. In no instance that we know of have stations been especially established for the sole purpose of catering to travel, as would be necessary between Magnuson's Ranch, 6.1 mi. south of Schellbourne Junction, and Wendover.

THE LONGEST WALK TO WATER

We wish to point out that the engineering report states under this heading that the longest possible walk to water on the Lincoln Highway is 17 miles, in other words, the longest distance between water is 34 miles—Orr's Ranch to Granite Mountain Spring. The report neglects to state that between Orr's Ranch and the Granite Mountain Spring, the present Lincoln Highway passes "County Well," 17 miles from Orr's.

It is true that this well is not now running, as it has not been maintained and kept clean. However, there



Nearing County Well on the present Lincoln Highway between Orr's Ranch and Granite Mountain Spring. Many sections of this natural road are virtual speedways



Tourists stopping for water at Granite Mountain Spring. The state laid 5,000' of underground pipe to bring this water to the road

has always been water developed at this point in the so-called "Government Wash," and it is a well known fact that water can again be developed by the simple process of cleaning out the well, which was originally dug 20' deep in the days of the old stage line, and later driven 60' deep.

We recognize the fact that the alignment between Orr's Ranch and Granite Mountain, selected by the engineers and considered in the report, shortens the distance 2 miles by running north of the County Well. However, the new alignment also crosses the Government Wash and a well can certainly and inexpensively be driven on a line with the present County Well at about 17 miles distance from Orr's Ranch. Such an easy and quick water development, if it were important, which it is not, would make the longest walk to water on the Lincoln Highway about 8.5 miles.

The report states that the longest walk to water on the Northern Route is 6 miles. We wish to point out that between Wendover and Proctor (a section house on the Western Pacific Railroad, in sight from the point where the Northern Route crosses the railroad) is a distance of 19 miles along which there is no water. Here, therefore, the longest walk to water would be 9.5 miles. Also, there is now no water available between Low Station (a point about one-quarter of a mile south of the Northern Route) and Knolls, a distance of 19.8 miles. Both these points are section houses, where drinking water can be secured, but the longest walk to water between these points would be 9.9 miles.

We bring out these points not because they are material to the problem, but merely to indicate a certain "color," noticeable frequently in the report, favorable to the Northern Route, a "color" which we wish to point out again we believe was unconsciously injected into the report by your engineers as a result of their continual association during their investigations with those who were exerting every effort to prove the Northern Route's desirability over the Lincoln Highway. Those favoring the Lincoln Highway, including our National, State and local officials, were not given an opportunity to assist your engineers during their investigations.

“DESERT HAZARDS”

Under this head the report points out that there are long stretches on both routes without habitations. It cites the distance between Orr's Ranch and Gold Hill on the Lincoln Highway (66.9); it neglects to cite the distance between Wadsworth and Lovelocks (63.0 miles) and the distance between Wells and Wendover (65.5 miles) without habitations on the Northern Route. The report refers to the distance between Wells and Wendover by stating that tourist traffic could readily reach the railroad or ranches two to eight miles away across country to the north and east, along the Southern Pacific Railroad; another instance, in our opinion, of the absorption into the report of local color.

Further under this head the report states that the question of habitations is of little importance except in seasons of light traffic, as aid can be expected from other tourists rather than from the railroads or infrequent ranches, in case of trouble. The report does not point out that in seasons of light traffic, when no assistance from other tourists can be depended upon—that is to say, during at least seven months of the year—the travel on the suggested connection from Wendover to Schellbourne Junction could readily encounter difficulty 44 miles from the nearest habitation or possibility of human assistance or communication, the distance between habitations or points of communication on this link being 88.6 miles.

The report, being unconcerned with the heavy Los Angeles travel, devotes no attention to the real “Desert Hazards” on the Mohave Desert.

“5. CURVATURE”

The report dismisses the question of relative curvature on the two routes as of no significance, it being possible to secure adequate curvature where necessary on both.

“6. TIME IN TRANSIT”

In the elaborate computation used in the report to work out a theoretical time in transit over both routes between Main Forks and Wadsworth, a table as to the

way grades affect traveling time is used, in regard to which we have no knowledge. This computation indicates, to the satisfaction of your engineers, that the difference in time required to drive the two routes is 2 hours and 40 minutes. This difference is insignificant anyhow, and of no real importance to the problem if it were ten times as great, for the reason that a possible saving of time, by driving a route which does not lead the major part of the travel to its desired destination, is immaterial. We assume, however, that much of the difference in time computed was due to the difference in mileage indicated. It is sufficient here to point out that the Lincoln Highway is 12.19 miles shorter between Main Forks and Sacramento than the Northern Route.

Tourists who might be traversing either of these routes between Salt Lake City and Sacramento would take several days for the journey. The possibility of an hour or two of theoretical difference in the driving time would, even if both routes were completed to a government standard for the entire distance, have no bearing on the choice of the through travelers, the majority of whom would take the route offering the greatest scenic and historic attractions, even if the difference in time required was twenty-four hours. We will point out later that the Lincoln Highway is the most scenic and historic route across Nevada.

"7. OPERATION COST"

Elaborate theorizing on this subject for the purpose of arriving at a fanciful difference in cost of operation per vehicle of \$6.93 between Main Forks and Wadsworth, while interesting, of course has no bearing on the true problem. We have no way of figuring what this difference would be as applied to the routes between Main Forks and Sacramento, but submit that one guess is as good as another. The only reason that this matter is touched upon here at all is to point out another instance of what we have referred to as "color," in the capitalizing of this assumed difference in cost on the basis of 100 vehicles per day for 365 days per year and arriving at an arbitrary sum as the interest at 5% on \$5,058,900.00.

The fact is that, if the engineering report's calculation is accurate, this difference of \$6.93 amounts to but 1/3 of a cent per mile, per person, based on 4 persons to the vehicle and a distance of 509 miles. Further reference to this subject of "Operation Cost" will be made under the heading, "Profiles and Rise and Fall."

"8 & 9. PROFILES AND RISE AND FALL"

Much space is devoted in the engineering report to the tabulation of summits; to tabulations showing mileage of grades of various percentages; and to the question of relative "rise and fall."

One of the fundamental errors into which we believe your engineers have fallen, in comparing the relative values of the two possible main routes, is that of approaching the problem as they would if, as engineers, they were locating a railroad for the economical operation of freight and passenger trains. Such detailed comparative data in regard to the routes applies in no respect to this problem, whether we place the western terminal arbitrarily at Wadsworth or at its true point of location, Sacramento.

We have shown that it is conservative to assume that 90% of the travel which will use any road improved between either two points consists of "foreign cars," traveling for pleasure. But regardless of what percentage of the travel represents the "foreign cars" that travel is all that is to be considered in connection with relative "Rise and Fall" and "Profile" anyhow, for the local travel using either route is subjected to the rise and fall of the country in any event. Local travel using either route cannot use the other one to avoid summits. The only travel, therefore, at all interested in the comparative profiles of the two possible routes, is the through travel—"the foreign car."

PASSENGERS NOT FREIGHT PRIME CONSIDERATION

Now while railroad engineers would seek a location as flat as possible and would avoid "rise and fall" to save cost of construction and cost of operation, largely disregarding the comfort, pleasure and attractiveness of

the route for those who journey through the area, highway engineers in planning a route for tourists' traffic cannot, we submit, be governed by any such considerations. They must largely consider the pleasure, comfort and attractiveness of the route. Motorists do not flock to Switzerland because it is a flat monotonous plain, easy to drive and through which it is economical to operate a motor vehicle! Switzerland is not the Mecca for the tourists of the world for any such reason!

No man was ever known or will ever be known to drive his car and take his family through an uninteresting and disagreeable flat country for pleasure and recreation, due to the fact that it is a fraction of a cent a mile cheaper in gasoline consumption than another route traversing a beautiful scenic area with many interesting historic associations. The basic error of using data in regard to rise and fall as a foundation for any elaborate argument in favor of one route or another designed for tourist traffic, is therefore obvious.

The data compiled by your engineers under this head will be of value as indicating the ultimate desirability of constructing both routes, as we have before pointed out should ultimately be done. In case through vehicular freight traffic should, as it may, become of importance, it would go by way of the route with less "rise and fall"; but of course that traffic is not in sight as an important factor. Particularly is freight traffic not a factor in the situation now, along the Northern Route, as the railroads there serve not only the light passenger traffic developed locally but also for all freight transportation required between Salt Lake City or Reno, and points in northern Nevada. Along the Lincoln Highway, where the greater population is situated, an improved highway must serve for both freight and passenger travel, due to the non-existence of east and west railroad facilities and the impracticability of providing an east and west railroad across central Nevada because of the topography discussed in the engineering report.

LINCOLN WAY SCENIC AND HISTORIC NEVADA ROUTE

Scenically the two routes across Nevada cannot be compared. The Northern Route follows the low country

along the Humboldt River and through swamp land of the utmost unattractiveness and monotony for 500 miles. The Lincoln Highway, on the other hand, as is indicated by its profile, provides a series of changing views and distant prospects from its many summits which are one of the delights of the eastern tourist crossing the West. None of the summits on the Lincoln Highway are in any way difficult to traverse; none of them even approach in height the summits which **must** later be crossed on **any** route into California, in the Sierras. They do, however, pleasingly break the monotony of the drive across the frequent flats and valleys in a way most welcome to those grown weary of the long level stretches of the Middle West.

That the relative scenic attractions of the western roads should be given consideration as an important element in the decision as to which should be first improved for the tourist traffic they are designed to serve, was well brought out in a recent report prepared for the Secretary of the Interior by Dr. Frank A. Waugh, of the United States Forest Service, who in commenting on the scenic attractions of Utah made the following statement, pertinent here:

"It is urged that in the development of any recreation program, every effort be used to play up minor interests along the main road, to interpret to travelers the genuine beauty which these intervening spaces certainly possess, and use these stretches of quieter landscape as a physical and psychological preparation for the highly spectacular features which now serve as main objectives for tourists."

The main objectives for west-bound tourists leaving Salt Lake City for central and southern California comprise the spectacular attractions of Lake Tahoe, the Yosemite, the Redwoods, Sequoia and General Grant National Parks and the beauties of the Sierras. But the route to such main objectives should unquestionably be so selected as to provide, if possible, scenic attractions of its own. It should not be regarded by tourists or road locaters as merely a necessary hardship—as a route to

be traversed as quickly as possible through an area one is forced to cross—but as a highway through a region holding much of scenic and historic interest.

A DRIVE OF SUPERLATIVE INTEREST AND CHARM

The Lincoln Highway across Nevada, once brought to that stage of satisfactory improvement guaranteed by existing contracts, will be a drive of superlative interest, possessing a unique scenic charm and with characteristics as noble and inspiring in their way as those of Colorado, Arizona, Oregon or California. The Lincoln Way is the old trail of the pioneers; of the Pony Express; of the Overland Stage. Historic associations teem along its course and vie with the vast impressive empty distances which impress the eye from every summit, as elements of never-to-be-forgotten interest to the traveler. Those "Ghost Cities," once thriving mining camps, humming with life and industry in the boom days of the '70s—Eureka, Austin, Virginia City—possess a romantic attraction for the traveler, with their history of past wealth and glamorous adventure, which no series of prosaic farming communities, railroad stations and cattle towns can equal. The Lincoln Highway, from every standpoint, is the route across Nevada for the tourist "Seeing America First" and seeking educational recreation and scenic inspiration.

CHAPTER XI

“QUANTITIES AND COSTS”

THE comparative cost of construction of the two routes across Nevada is not pertinent to the problem, in view of the admitted fact that both routes across Nevada must be built. The only part of the true problem upon which relative costs can be assumed to have any bearing, is the relative cost of constructing to Ely by way of Wendover or by way of Ibapah. This we have commented upon, showing that the route to Ely by way of Ibapah (the Lincoln Way) can be opened not only much sooner but at less expense.

PAVING A THOUSAND MILES OF WESTERN TRAIL IS HYPOTHETICAL ONLY

We have studied the data provided in the engineering report under the head of “Quantities and Costs” with care. Much of it can be disregarded as immaterial to the present problem; for example, all of that data having to do with the paving of the two routes. The report points out that the sparse population and the low valuation along both routes will not justify a high type of construction for many years to come. It presents, nevertheless, elaborate tables as to the relative cost of paving which, under no circumstances, can be considered as of any practical value, for paving cost estimates made at this time, would be of no value 15 or 20 years hence, when it may become possible and advisable to contemplate certain sections of paving.

Before leaving the question of paving we call attention to the following editorial comment in the engineering report on this subject, which is important only as evidencing again that unconscious “color” of which we find evidences at many points:

“The conditions governing on the southern route (Lincoln Highway), such as narrow gauge haul, distance

from rail, etc., are so extreme that the figures developed for cost of paving are almost stupefying."

We see no reason for this gratuitous comment. The theoretical average cost per mile for paving the Lincoln Highway from Main Forks to Wadsworth, estimated in the report, is \$33,000.00, which, as paving costs go, is by no means "stupefying," particularly when we stop to realize that under no circumstances will either route be paved before 1935.

Comparative costs of completing a government standard road to either the 16' or 24' width are also of academic interest only, for as we have pointed out, it will not be possible for many years to undertake to complete either road to even the minimum government standard.

Cost comparisons to be of value to the problem must necessarily be based upon the relative cost in total of constructing only those sections which are necessary to open each road for through travel. These costs we have compared, utilizing your engineers' estimates of cost per mile for the construction indicated as necessary. Unfortunately these average costs per mile are of little value if applied to computing the cost of only a part of the total length of the project upon which the average is based in the report. This is due to the fact that construction of widely differing nature, difficulty, and expense, is included in one project and the cost averaged for the entire project. One example of this will suffice.

DIFFICULTY OF ACCURATELY COMPARING COSTS OF SECTIONS REQUIRING IMPROVEMENT

The first project for Lincoln Highway construction presented in the engineering report is 79.1 miles in length and runs from Main Forks through to Granite Mountain. In this distance there are at least three differing requirements to be met by construction, each varying greatly in the cost per mile.

The section from Main Forks to Clover lies in a level valley where there already exists an excellent gravel road and where a road can be brought to government specifications, either 16' or 24', at a very moderate cost.

Probably it is already up to Government standard. From Clover west, nearly to Orr's Ranch, this project traverses Fisher Pass where unquestionably the cost per mile of construction would be at least double the cost of construction in Rush Valley, for considerable blasting would be necessary and for a short distance a new alignment required to meet the Federal standard of maximum grade. The last condition encountered in this one project is that existing between Orr's Ranch and Granite Mountain. Here the road would traverse principally long flats without any grade whatever and with a considerable haul required for gravelling purposes. The average cost per mile, therefore, between Main Forks and Granite Mountain, shown as \$8,433.00, can hardly be applied accurately to computing the cost of any section of 5 or 10 miles in extent between the terminals of the project. We have used your engineers' figures for this purpose, only because no others were available.

It is unfortunate, from the standpoint of an endeavor to compare costs of needed construction, that separate projects were not established between points where the construction was of a generally similar nature, as was done, for example, on project Section 11, i. e., Knolls to Wendover—40.3 miles, across the Great Salt Lake Desert on the Northern Route and on project Section 14, the Goodyear Cut-off—20.3 miles, across the Great Salt Lake Desert on the Lincoln Highway. Where this was done it becomes possible to accurately compare costs per mile in considering the really consequential question of which route can be opened to traffic with the least expense for needed construction.

COMPARATIVE COSTS ON THE TWO DESERT CROSSINGS IN UTAH

At an expense to this organization of several thousands of dollars during the past ten years, our officials have made very thorough investigations as to methods and cost of highway construction on the Great Salt Lake Desert. These investigations have been made during periods of both high and low water and in mid-winter as well



Looking across the Great Salt Lake Desert in 1916 at its narrowest point—about where the Goodyear Cut-off was later built



F. A. Seiberling, President, and other officials of the Lincoln Highway Association, investigating the soil and sub-surface water on the Great Salt Lake Desert in September, 1917

as during the summer months. Much time has been spent in conversing and corresponding with those local residents who have been familiar with this region all their lives. Many of these local residents are and have been for years our representatives. Not only have the officials of the Association themselves investigated local conditions thoroughly but the organization has employed engineers to make investigations and surveys.

The investigations of our officials indicated as early as 1916 the desirability of crossing the desert north of Fish Springs at its narrowest point and where careful prospecting indicated water could be developed, at Granite Mountain.

During the course of the investigations which led up to the Association's contribution to the State of Utah for the construction of this desert crossing, a profile survey was made and a careful study of the depth of water, which was present in the wet spring season at all points along the northward flow from the Sevier Desert toward Great Salt Lake. Mounds of desert soil were thrown up at many points to permit a study of the extent of water erosion and the degree of capillarity of the soil. Tests were made as to the bearing capacity of the sub-soil and excavations were made at one mile intervals along the proposed line, to determine exactly at what depth the sub-surface water was encountered.

OUR DATA VERY COMPLETE

Careful investigations were also made along the line of the Western Pacific Railroad. Much interesting and valuable information was secured from those in charge of the Salduro salt mines, who were familiar from long personal observation with the conditions existing along the so-called Wendover road where the desert is 123 feet lower in elevation than at the Lincoln Highway crossing.

Investigations were conducted which led to the location at Black Point, on the west side of the desert, of unlimited quantities of excellent gravel, so placed by nature and of such character as to permit loading it into trucks or railway cars by gravity, or by steam shovels without blasting.

We cited the foregoing facts merely to indicate that we have at our command much experience and information enabling us to study intelligently the relative costs presented in the engineering report as to Section 11 and Section 14, the two crossings of the desert.

DESERT LINKS THE VITAL FACTORS ON BOTH ROADS

We have already indicated previously in this Brief those sections of both routes in Utah which we know it is necessary to at once construct in order to provide a satisfactory and passable road to connect with either road across Nevada. Of primary importance, as necessarily the first section to be built as a part of either road, is the desert link in each. The Northern Route is travelling now, except for Section 11—40.3 miles. The Lincoln Highway is travelling now at all times, with the exception of Section 14—20.3 miles. The practical, present problem, of immediate and vital importance in any cost comparison between the two routes, therefore, is the question of relative expense of opening these two sections.

Of importance only in this connection are the figures in the report showing the cost to complete, i. e., those which take into consideration the salvage value of work already done. The net cost to complete the Knolls to Wendover road (Section 11) is shown by the report to be \$299,954.00. Since the report was compiled, the district engineer has increased the estimate by \$80,000.00, which brings the total net cost estimated, to \$379,954.00. The net cost of completing the Lincoln Highway desert crossing (Section 14) is estimated by your engineers to be \$186,932.00. The saving effected by opening the Lincoln Way across the desert, over opening the Wendover route, is therefore, \$193,000.00; a sum greater than the total cost of opening the Lincoln Way!

To construct the desert crossing to Wendover would require immediately over \$98,000.00 from the State of Utah, or from Tooele County, to meet the Federal aid. To construct the Lincoln Highway desert crossing to the same high standard would require from the State of Utah, or from Tooele County, less than \$49,000.00. (Tooele County will provide the money to open the

Lincoln Way desert crossing; it will provide no money to open the road to Wendover.)

OPENING GOODYEAR CUT-OFF SAVES \$1,000,000.00

If the road to Wendover from Knolls is opened by the expenditure on the desert in Utah of \$379,954.00 it is immediately necessary to expend \$898,507.00 to open a road from Wendover to Schellbourne Junction and also \$743,621.50 to open a road from Wendover to Wells, in Nevada. If the Lincoln Highway Goodyear Cut-off is opened, by the expenditure of \$186,932.00 on the desert, the road to Ely is open without additional expenditure, in Nevada, for many years. Others may claim that if the Lincoln Highway desert crossing is opened, immediate expense will be entailed in Nevada to connect the Northern Route from Halleck with the Lincoln Way at Gold Hill, but we have shown why this is not by any means necessary.

Eliminating theoretical considerations entirely, the cold fact is that the difference in expense necessitated at once is the difference between \$1,278,461.00 (Knolls to Wendover and Wendover to Schellbourne Junction) and \$186,932.00 (Granite Mountain to Black Point) or \$1,091,529.00, a sum equal to more than half of the total amount Utah and Nevada combined receive from a Congressional Federal aid appropriation of \$75,000,000.00.

SOME COMMENTS ON ESTIMATES

In our foregoing comparisons we used your engineers' figures. However, we cannot entirely agree with them. Nor do we understand the method of figuring the estimates on the two desert links.

Perhaps some of the differences we wish to bring out here are covered by the additional \$80,000.00, which has been added to the estimates since we inspected them. We are not clear, however, on several points. For example, the estimate on the construction of Section 14 (Lincoln Highway) as a 24' grade, shows a total of 225,000 cubic yards of excavation as required. The estimate on the excavation required on Section 11 (Northern Route) as a 24' grade is 354,200 cubic

yards. Now the Northern Route crosses the desert at a lower elevation than the Lincoln Highway and at a point where the water reaches a much greater depth, at the lowest level of the entire desert where it is buffeted against the grade by the wind until it evaporates. Therefore, in providing for a grade of adequate height above high water for each road, it would naturally be assumed that considerably more fill would be required on the Northern Route. It will be noted from the above figures that while the Northern Route is double the length of the Lincoln Highway crossing, 95,800 cubic yards less than double the amount of excavating is estimated. This would indicate that the grade on the Northern Route is to be only about three-fourths as high as the grade on the Lincoln Highway.

We feel that much more than double the cubic yardage estimated for the Lincoln Highway grade should be estimated for the Knolls to Wendover grade, in view of the fact that the distance is double and the height of the grade required is unquestionably greater.

DIFFERENCES IN UNIT COSTS

Further, we note that 75% of the total volume of excavation estimated as required on the Northern Route is figured at 30c a cubic yard, whereas 80% of the total excavation estimated on the Lincoln Highway is figured at 60c per cubic yard, or double the cost of excavating on the Northern Route. Our experience fails to indicate any reason why there should be a 100% difference in the cost of excavating, with the same machinery, the same sort of desert soil on the Lincoln Highway and on the Northern Route. It is true that machinery and men can be more economically brought to the site of work along the Northern Route and that supplies can be provided at a lower cost for transportation. We do not believe, however, that these overhead charges, incidental to the actual work of moving the yardage, justify a 100% difference in the cost per cubic yard.

Further, we note that in estimating the excavation required on the Lincoln Highway (Section 14) as a 16' grade, 200,000 cubic yards are estimated at 60c per cubic yard and 5,000 cubic yards are estimated at \$1.00

per cubic yard, while in the estimate for the construction of the same section as a 24' grade, 200,000 cubic yards are again estimated at 60c per cubic yard and 25,000 cubic yards more are separately estimated also at 60c per cubic yard. In other words, in the estimate for the 24' grade all of the excavation is estimated at 60c per cubic yard, whereas if a 16' grade is built at the same location your engineers, for a reason we cannot understand, estimate 5,000 cubic yards at \$1.00.

All of the engineers' estimates on the construction of these desert grades are based on starting with nothing but flat desert and doing all of the work necessary to complete the grade, the salvage value of work already done being subtracted later. This being true, it is difficult to understand why the same dirt to make a 24' grade can be moved at 60c per cubic yard that would cost \$1.00 per cubic yard on a 16' grade.

Further, in the estimate for constructing the Lincoln Highway as a 16' grade, all excavating (205,000 cu. yds.) is shown to cost \$125,000.00, while in the estimate for building the Lincoln Highway as a 24' grade, all of the excavating (225,000 cu. yds.) is shown to cost \$135,000.00. In view of the fact that a 24' grade requires nearly 50% more excavating than a 16' grade, which means in this instance 20.3 miles of grade 8' wide, we cannot understand how this additional work can be accomplished at an additional expense of but \$10,000.00. If 16' of grade will cost \$125,000.00 how can 8' more grade of the same height at the same location be built for \$10,000.00, or less than 10% more money for nearly 50% more work?

Also, it will be noted that to build the Lincoln Highway grade 24' wide for 20.3 miles, is estimated to require but 20,000 more cubic yards of excavation than is required to build it 16' wide. This addition of but approximately 1,000 cubic yards per mile would permit of an 8' grade but about 8" high, while the estimate for the original 16' grade contemplates a grade 2' 8" high.

HEIGHT OF GRADE REQUIRED

Further examination of the estimates produces the following comparative data:

Lincoln Highway, 24' grade—225,000 cu. yds. on 20.3 miles equals 11,082 cubic yards per mile.

This yardage provides for a grade 2' high.

Northern Route, 24' grade—354,200 cu. yds. on 40.3 miles equals 8,789 cubic yards per mile.

This yardage provides for a grade 1' 7" high.

Lincoln Highway, 16' grade—205,000 cu. yds. on 20.3 miles equals 10,099 cubic yards per mile.

This yardage provides for a grade 2' 8" high.

From a consideration of the above it will be noted that a grade from 5" to 13" higher is estimated as required on the Lincoln Highway, where there is a minimum of water, than is estimated as required on the Northern Route where there is a maximum of high water. It will also be noted that the estimates call for a grade on the Lincoln Highway 2' high, if it is built 24' wide, and 2' 8" high if it is built 16' wide. We cannot understand why width of grade affects height necessary.

DRAINAGE STRUCTURES

This question of adequately caring for the water, which at certain seasons of every year flows north on the Great Salt Lake Desert and which constitutes the real difficulty in adequately constructing any road across the desert, is very important. We note that your engineers have estimated the necessary expenditure of \$11,600.00 for drainage structures and culvert pipe on the Lincoln Highway desert crossing—20.3 miles in extent, where the main water is 50 yards wide at its highest point, while they estimate but \$16,300.00, or only 40 per cent more expense, to take care of the drainage structures necessary on the Northern Route crossing of 40.3 miles, where the main flow of water is 6 miles wide at its high point.

SURFACING

After checking your engineers' estimates of surfacing cost, based on 2,000 cu. yds. of gravel per mile on each route, we wish to point out that the cost of this surfacing per cubic yard on the Northern Route is estimated at



The Wendover Road at a point near the edge of the salt beds, April 18th, 1922. Water was 12 miles wide by 40 miles long, maximum depth, 20". Grade officially announced as completed December, 1921. Completed 22' wide: four months later 8' 10" wide



Another view taken on the Wendover Road in 1922 showing the destruction of the wooden guards placed to prevent the erosion of the salt water. No travel has ever been routed over this road

\$2.00 and on the Lincoln Highway section at \$5.00. Upon making inquiry as to the reason for this 150 per cent difference, we learned from your engineers that they estimated the cost of hauling gravel on the Northern Route via the Western Pacific Railroad, while for the Lincoln Highway job they estimated motor truck haul.

In each case the gravel must be transported some distance. On the Northern Route, from a point in Nevada in the neighborhood of Silver Zone, an average rail haul of approximately 54 miles and on the Lincoln Highway, from Black Point, an average haul of 10 miles by truck or otherwise.

We appreciate that a considerable saving is involved in the rail haul, and in the fact that along the Northern Route gravel can be dumped directly from the Western Pacific rails, even though it must be re-handled by conveyors over a distance of 110' to the site of the desired grade. We do not believe, however, that your engineers have estimated the most economical method of hauling the gravel required for the Lincoln Highway. We believe that the difference in cost of hauling and spreading can be made very much less than \$2.50 per cu. yd. We maintain that the gravel for the surfacing of the Lincoln Highway desert section should be transported by industrial railroad, not by motor trucks.

The cost of hauling by industrial railroad in level country should be approximately the same everywhere if a wage scale approximately the same is assumed. We have investigated the cost per ton mile of hauling via industrial railroad in Wayne County, Michigan. We find that last season the cost averaged 15c per ton mile, based on hauling about 500,000 tons, or 125,000 cars, an average distance of 3 miles, the maximum haul being 6 miles and the minimum haul being 2 miles. Wayne County is level country, as is the Great Salt Lake Desert. The wage scale prevailing in Utah is less than that which prevailed in Wayne County, Michigan, in 1922.

At 15c per ton mile it would cost \$1.50 per ton for the average haul of 10 miles necessitated in gravelling the Lincoln Highway Goodyear Cut-off, and the cost

per cu. yd. ($1\frac{1}{2}$ tons) would be \$2.25, instead of \$5.00, as estimated by your engineers on the basis of motor truck haul.

HAULING BY INDUSTRIAL RAILROAD

The above estimate of cost per ton mile for transportation via industrial railroad (15c) does not include loading or unloading, but does include the laying and taking up of tracks and maintenance on tracks. As to the cost of loading and unloading, there is no reason to assume that it will be more expensive to load the gravel at Black Point onto industrial railroad cars than onto trucks, as the simple method of gravity loading would undoubtedly be employed in either instance. The dump-cars of the industrial railroad, running on track laid on the prepared sub-grade, would dump onto the grade in the same manner as a motor truck.

Mr. Edward N. Hines, Chairman of the Wayne County Board of Road Commissioners, states that his experience here, covering 13 years, has been that the longer the haul the lower the cost per ton mile. For example, while the average cost per ton mile in 1922 in Wayne County was 15c, the season's average haul being 3 miles, the cost on those jobs requiring a 6-mile haul averaged but $11\frac{1}{2}$ c per ton mile. It is reasonable, therefore, to assume that with an average haul of 10 miles, as necessitated on the Goodyear Cut-off, the cost per ton mile would be less than 15c. This indicates that an estimate of \$2.25 per cu. yd. is conservative.

In Wayne County 15 per cent for depreciation and overhead is added to the cost per ton mile. Adding this amount we produce an estimated cost of \$2.59 per cu. yd., only slightly more than one-half the estimated cost of handling the surfacing with motor trucks.

It remains only to state that to haul the gravel for the Goodyear Cut-off by industrial railroad would require 20 miles of industrial railroad track, 5 locomotives and 200 cars, which can be readily transported to the job by motor truck from Gold Hill, Utah, the railroad terminal, a distance of 12 miles. Industrial locomotives, track and dump-cars are regularly hauled about Wayne County in motor trucks.

The foregoing data shows why we maintain that the estimate on the cost of surfacing the Lincoln Highway across the desert is approximately 100 per cent in excess of what it should be if the most efficient manner of doing the work were considered. This saving by the use of industrial railroad also affects the estimates on the cost of rip-rap, which is figured in your engineering report at \$4.50 per cu. yd. on the Lincoln Highway and at \$2.00 per cu. yd. on the Northern Route. Practically the same proportionate saving would be effected from this estimate, if the material for rip-rapping was transported on industrial rails.

SALVAGE

The salvage estimated by your engineers on both the Northern Route and the Goodyear Cut-off on the Lincoln Highway is very interesting to compare.

The salvage value of the existing grade on the Northern Route is estimated at \$79,500.00, which, we were informed, is about 50 per cent of the value of the work first done. Thus apparently about \$159,000.00 has been expended to date on the construction of the Northern Route between Knolls and Wendover. This work was accomplished between 1916 and 1921, it being the latter year when the Northern Route was officially proclaimed as "completed." We wish to point out that, while \$159,000.00 or thereabouts has been expended on the construction of the northern crossing of the desert, that road has never been passable for through travel.

On the other hand, the salvage value of the work already accomplished on the Lincoln Highway Goodyear Cut-off is estimated by your engineers to be \$149,000.00. On this section there was expended the \$100,000.00, contributed to the State of Utah by this Association, plus a sum which has been variously stated by the Utah State authorities. The largest sum ever stated to have been expended from the state treasury in addition to our money is \$80,000.00. Thus, a possible maximum of \$180,000.00 was expended on the improvement of the Goodyear Cut-off in 1918 and 1919. No expenditures have been made on this link since 1919, except for a few hundred dollars' worth of maintenance in 1920. This

section has received no maintenance whatever since 1920, yet the depreciation has been, according to your engineers' figures, but \$31,000.00, or 17 per cent of the value of the work first done. This desert crossing has carried all of the travel west-bound from Salt Lake City, headed for Sacramento, since 1919.

THE GOODYEAR CUT-OFF HAS WITHSTOOD TRAFFIC AND THE ELEMENTS

Four years of heavy travel and of constant attack by the elements on a route with very inadequate drainage facilities have depreciated the original value of the Lincoln Highway grade 17 per cent. One season of attack by the elements, with no travel, has depreciated the value of the work accomplished on the Northern Route 50 per cent. This comment, based on your engineers' estimates of the salvage value of existing work, is interesting as showing the far greater difficulty to be encountered in constructing and maintaining an adequate road across the desert to Wendover, than in constructing and maintaining one between Granite Mountain and Black Point.

The Knolls to Wendover construction remains an unsolved problem. Methods attempted during six years have resulted in failure each season when the period of high water occurs. The method proposed by your engineers for constructing a grade across the salt flats, which comprises ditching through the salt at points where it is from 4' to 6' in thickness, and excavating clay from beneath the salt for the construction of a grade to rest upon the salt bed itself, has not been proven. This suggested method is based on inquiries made by your engineers of those who have been active in the work of constructing the old grade between Knolls and Wendover, which has invariably failed.

Our contention is that all data available, as well as the history of attempted road construction along the Western Pacific, points to the conclusion that, in undertaking this work, the Government and the state will be endeavoring to solve an extremely difficult and unique problem, which is much more likely to involve more time and more money than is estimated, than less.



Looking west from a point near the east end of the Goodyear Cut-off showing the damage done to the unsurfaced, unmaintained grade by traffic and the elements



Looking west from a point about 7 miles from the west end of the Goodyear Cut-off showing how that section which was graveled, according to contract, has stood up under traffic and the elements

On the other hand, in considering the early and economical opening of a road west from Salt Lake City, the Goodyear Cut-off, which was constructed by the most elemental methods and in the most obvious way, and which was never completed and never properly protected from the attacks of water by adequate drainage structures or by surfacing, is still carrying the travel and has been the only road to stand up and remain passable, even without maintenance.

It has been already proven feasible to cross the desert between Granite Mountain and Black Point; it is a known fact that a road can be built and maintained there satisfactorily and at once. We contend that this work should be immediately done and the traffic provided with an avenue to the west while, if desirable, studies may proceed as to the practicability of opening the Northern Route at some time in the future when it may become necessary as a connection for the local traffic of northern Nevada.

FALLACY OF CAPITALIZING THEORETICAL SAVINGS

A word of comment here on your engineering report's summary, under the heading "Cost." We deplore the policy of capitalizing theoretical savings at 5 per cent in order to develop enormous figures which mean little but tend to lend weight to previously adopted conclusions.

In the summary under the heading "Cost," the report shows the direct saving by the construction of the Northern Route between Main Forks and Wadsworth, to be \$1,300,103.00. This figure represents the difference in construction cost estimated on the basis of a 24' government standard road entirely across Utah and Nevada on both routes. We again impress that it is fundamentally unsound to compare the cost of the two roads across Nevada, this question not entering at all into the problem, as both roads will be built. We have also said much to indicate that this figure is of no practical importance, because it assumes a completed government standard road for nearly a thousand miles, a purely theoretical conception, and also because the integrity of the estimates of the cost of construction on those sections most vitally necessary can be seriously questioned.

To this large sum is added, in the report's summary, the theoretical saving in maintenance each year, based on a difference in length of 22 miles and on an estimated cost of maintenance of \$200.00 per mile per year. Both roads across Nevada, as construction proceeds, will necessarily be maintained anyhow: Adopting the proper western terminus, we show that the Lincoln Highway is 12 miles shorter than the Northern Route: The relative maintenance of the two possible routes in Utah can by no means be considered the same: Maintenance on long stretches of both routes, whereon it will be years before a Federal standard road is constructed, will, for the same number of years, be maintained for far less than \$200.00 per mile a year—on many long stretches practically nothing will be spent.

To the theoretical sum representing difference in construction cost on both roads entire and the equally theoretical sum indicating difference in total maintenance cost, is added the sum of \$252,945.00, labeled "indirect saving in operating cost per year." We have already at some length commented upon the questionable wisdom of endeavoring to develop a difference in operating cost of motor vehicles on the two routes and the endeavor to make such a highly impractical consideration a factor related to the problem.

The total of the "saving in maintenance cost per year," plus the "saving in operating cost per year," is then shown by the report to be equivalent to 5 per cent interest on \$5,146,900.00.

We wish to point to the above, in our opinion valueless, computation as another instance of a slight suspicion of "color" tending to support a recommendation.

"11. MAINTENANCE"

Under this head the report first states that the cost of properly maintaining the two routes between Main Forks and Wadsworth would vary greatly, although the amount of difference in money is difficult to compute. It then states that \$200.00 per mile per year is a fair average maintenance estimate on both routes entire and that on this basis it would cost \$4,400.00 a year more to maintain the Lincoln Highway due to the fact that



State forces at work constructing the Goodyear Cut-off across the Great Salt Lake Desert in 1918. Caterpillar tractors pulling elevating graders constructed the road in the most simple and obvious way. No special problems of any sort!



A view of the completed grade on the Goodyear Cut-off from a photograph taken in 1919. Had this grade been gravelled and given ordinary maintenance it would be in excellent condition to carry the travel today

it is 22 miles longer than the Northern Route.

The relative cost of maintaining the two routes across Nevada is absolutely immaterial to the problem, as both routes must and will be built and maintained. It is worth while to compare only the possible cost of maintaining the two routes in Utah where only one need be built for years. This comparison is not made in the report.

We cannot accept, as a practical basis for comparison, the sum of \$200.00 per mile per year as an average maintenance cost on both roads entire. We do not agree that the relative maintenance cost on both roads entire has anything to do with the problem. Nevertheless, it is worth noting that, accepting your engineers' figures as to average cost per mile for maintenance, and accepting their contention that the only item to which a money value can be attached is the additional cost of maintaining an additional distance, the Lincoln Highway between Main Forks and Sacramento could then be maintained for \$2,400.00 per year less than the Northern Route, instead of for \$4,400.00 per year more, because it is 12 miles shorter rather than 22 miles longer.

MAINTENANCE ON DESERT ROAD TO WENDOVER WORTHY OF SPECIAL STUDY

It is pertinent here to note the fact that the engineering report devotes no consideration whatever to any maintenance problem between Knolls and Wendover. The possibility of exceptional maintenance cost being required on this desert construction, which in the past it has been impossible to even open for travel at all, is ignored. We wish to point out that this question is one worthy of very careful consideration, as having a vital bearing upon the practicability and wisdom of constructing a road between Knolls and Wendover at all, and particularly of constructing a road to the specifications suggested in the engineering report and with the drainage facilities therein indicated as adequate.

CHAPTER XII

“IV. ANALYSIS OF ROUTES FOR INTER-STATE CONNECTIONS, NEVADA-UTAH”

UNDER this head in the report three possibilities of routing are considered, the point at issue evidently being which of the three possibilities would save mileage. We have already pointed out that the problem involved is not the saving of mileage, but the serving of traffic.

Particularly is it true that, from a practical standpoint, the problem cannot be approached by a comparison of the total mileage involved, rather than only the mileage necessitating improvement promptly.

We have pointed out that in the ultimate the necessary and desirable thing to do, from the standpoint of serving the through travel as well as the minor local travel, is to adopt what, in your engineering report, is characterized as “The First Possibility,” that is, the Northern Route entire—681.7 miles—and the Lincoln Highway entire—669.5 miles; to which should be added the Midland Trail from Ely, Nevada, to Los Angeles—563.6 miles.

DESIGNATING FEDERAL AID HIGHWAYS COSTS NOTHING

We appreciate that the conservation of Federal aid mileage in Utah and Nevada is now necessary, due to the 7 per cent limitation and the vast areas to be served, but we do not believe that the final ultimate solution of the great problem of adequately serving the tremendous transcontinental traffic which the future will develop, should hinge upon the saving of some 90 miles of Federal aid **designation**. We impress the word “designation” because in comparing the possibility of “designating” various routes as Federal aid roads the entire mileage involved is considered, whereas the real point at issue now is not how many miles are to be “designated,”

but how many miles need be built, and built at once, to serve the travel.

By providing for the designation of the Lincoln Highway in Utah and Nevada as a Federal aid road, and for its prompt construction with the assistance of the Federal Government, the travel will be served, and served more promptly and more adequately and through the expenditure of less money to take care of those sections requiring construction. This is true even if it is admitted that a few more miles of **designation** may be required in Utah to obviate the necessity for the **construction** of many miles in Nevada. If the Lincoln Highway is designated and opened in Utah it does not follow that the immediate construction of a new route from Halleck to Gold Hill, in Nevada, is necessitated, for reasons which we have pointed out at length earlier in this Brief.

The "designation" of a route for ultimate construction with Federal aid costs nothing, and we have shown why it may be desirable to include the connection, Main Forks to Wendover to Wells, in the Federal aid system, for the ultimate service of Northern Nevada; but this construction can well await the financial ability of the two states, while the money available now is concentrated at once upon opening the most necessary and important through route from Main Forks to Ely. Four months' work at re-grading and gravelling the Lincoln Way project on the Utah desert would open a travelable and thoroughly practicable road, either to San Francisco or to Los Angeles. If it is not opened the travel waits.

We believe that it is clear that your engineers' analysis of routes for interstate connections in Nevada and Utah is directed at a fallacious objective; that of trying to save mileage of designation, making all other considerations subservient to that relatively unimportant factor.

"V. SUMMARY AND RECOMMENDATIONS"

We regret that the engineers, detailed to secure physical data in regard to the routes in Nevada and Utah, after a consideration of but a small part of the many elements of the problem, undertook to provide an answer which cannot do otherwise than affect the opinion of a

student of this question. Their answer would also, if made public, affect opinion in the states involved.

After adopting a "problem to be solved" which is not the true problem, the conclusion or solution reached could have been correct only by accident. We sincerely hope that the exhaustive nature of our comments on this extremely broad subject, has not prevented a careful study on your part of what we have had to say and that the erroneous conclusion of your engineering report has not too greatly tended to establish a pre-determination of the matter in line with its recommendations.

OUR RECOMMENDATIONS

We appreciate that our recommendations can have no weight with you, except as they are wise and practicable, and can be proven to be so upon investigation of our statements. We hope that our statements may be investigated fully, and that the contentions we have put forth in our Brief may be fully substantiated by investigation directed from your Department, to the end that a right decision may be reached, based upon consideration of all of the elements of the real problem from the broad standpoint of national policy, to provide an effective correlation of western highways to serve the travel of the future.

Your engineers recommend the Northern Route in Utah and Nevada as the primary route and the adoption of a road from Wendover to Schellbourne Junction and from that point via the Lincoln Highway to California as a secondary route. We recommend, on the basis of all of the data we have submitted, the adoption of the Lincoln Highway from Main Forks, Utah, via Ely and Carson City, Nevada, and Placerville, Calif., to Sacramento, as the primary road to be first opened and first completed. We recommend the inclusion in the Federal aid system as a secondary route, if the construction is later found to be feasible, the road from Main Forks to Wendover, Utah, to Wells and Reno, Nevada, and via Auburn, Calif., to Sacramento.

The construction from Wells to Sacramento will proceed rapidly, as we have shown, and the construction

from Main Forks to Wells can be safely left as a problem to be considered when the need to consider it arises, which will not be for many years. The opening of this section from Main Forks to Wells is a bridge it is far from necessary to cross until it is reached.

There are now and will be for many years difficult road problems to be solved in that vast area between the Rockies and the Sierras which we have been considering. Of fundamental first importance, overshadowing all others now and for any period it may be safe to predict into the future, is the prompt opening of a satisfactory route which will connect Salt Lake City with both northern and southern California.

“REMARKS”

Under this heading in the engineering report appeared a very significant paragraph, which we here quote verbatim:

“It is regrettable that Ibapah and Gold Hill cannot be reached by the routing suggested, but economy of construction cost and service to the traveling public make it impossible. It is most unfortunate that the excellent work done by the State of Utah and the Lincoln Highway Association on the Goodyear Cut-off and at Fisher Pass does not fall on the recommended route. Presumably the funds in sight and the probable traffic demand estimated in 1917 and 1918 contemplated the permanent use of much unsurfaced road and assumed that new construction would be confined to short sections of notoriously bad road, and this dictated choice of the southern route, where limited funds would unquestionably produce the more travelable surface for light traffic. With the imminent possibility of constructing a continuous highway from Salt Lake City to Reno, however, comprehensive study over the entire affected area makes clear a condition of relative construction and operation costs that unmistakably favors the Northern Route, in spite of the larger funds already expended on the Utah section of the Southern Route.” (Lincoln Highway.)

LIMITED FUNDS AND LIGHT TRAFFIC

It is indeed true that the funds in sight and the probable traffic demand estimated in 1917 and 1918 dictated economy and the choice of a route which, while shortest to Ely, also permitted of the use for many years of long sections of unsurfaced road. This needful economy and the consideration of several, if not many, years of use of existing roads is just as urgent today. As your engineers point out, limited funds, if expended on the Lincoln Highway, would in 1917 and 1918, as they will today, "unquestionably produce the more travelable surface for light traffic."

Funds are still limited, and light traffic is the only traffic being considered. Under no circumstances can the combined local and through traffic at its height on any road west of Salt Lake City be considered "heavy" traffic insofar as its damaging effect upon a road surface is concerned.

Transcontinental traffic or through traffic between Salt Lake City and California is "heavy" as compared with former years. It will become much "heavier" as time passes, but there is not now in sight a time when even the heaviest through flow of tourist traffic can be considered other than "light traffic" as related to the road surface required to handle it safely and expeditiously and with a minimum of maintenance.

One hundred cars per day is your engineers' estimate of the through travel, which would amount to 15,000 cars per season, for there is no through traffic before the first of June and none after the end of October. This is a conservative daily figure, for your engineers also estimate 36,500 cars per season of 150 days, or a traffic of 243 cars per day as possible within the near future.

We have presented figures compiled in Salt Lake City covering 1922 traffic west bound through that center for both San Francisco and Los Angeles. If we add together the best estimates available as to traffic out of Salt Lake City in 1922, over both the Arrowhead Trail and the Lincoln Highway, we still reach a figure far less than your engineers' estimate of the possible through

traffic which would follow a properly constructed western connection between Salt Lake and Ely. That the present amount of through travel toward the Pacific Coast is exceedingly heavy for transcontinental traffic, no one will deny. But that it is a heavy traffic, as traffic is measured in estimating the requirements of a road surface, no one will assert.

NO HEAVY TRAFFIC IN SIGHT

We believe that any highway engineer will agree that a traffic of under a thousand cars per day is a "light" traffic, which can be well accommodated with a very economical type of highway improvement. Even after having studied the flow of west-bound traffic for ten years, we would dislike to prophesy as to when through traffic west of Salt Lake City would reach a thousand cars a day during the touring season. We would not hazard the statement that such a traffic would not be reached within ten or fifteen years, but we will state without the slightest fear of contradiction from anyone familiar with the tourist traffic of the West, that it would not exceed a maximum of 300 or 400 cars a day during the next five years.

HIGHWAY FUNDS STRICTLY LIMITED

The State of Utah and the State of Nevada have the utmost difficulty in providing the funds to meet their Federal aid, and are confronted with the necessity of constructing many miles of highway vitally needed for their local travel. They can devote only a minor proportion of their total road funds to the provision of the highways required for the through traffic, but which do not coincide with the local requirements. In view of the fact that the highway funds available in these two states are strictly "limited" and that the funds in sight during the next several years are, in total, as inadequate to undertake the construction of a government standard road entirely across the two states as were the funds in 1917 and 1918 inadequate to undertake the improvement of the most impassable sections, we believe that the statement of your engineers that, on the Lincoln Highway "limited funds would unquestionably produce the

more travelable surface for light traffic," should be particularly stressed. It is one of the things we have endeavored to impress throughout our Brief.

We wish to stress, also that there is no "imminent possibility of constructing a continuous highway from Salt Lake City to Reno," to the Government standard, not if by "imminent" anytime within the next few years is meant.

THE VALIDITY OF CONTRACT

Your engineers, in the statement quoted, emphasized how unfortunate it is "that the excellent work done by the State of Utah and the Lincoln Highway Association on the Goodyear Cut-off and at Fisher Pass does not fall on the route recommended" by them.

We feel also that this is unfortunate, doubly unfortunate when an aspect on the question, which did not and could not enter into the consideration of your engineers, is given the importance it deserves. We refer to our contract of March 21st, 1918, with the State of Utah, upon which we have previously touched and which is provided in the Appendix (A) in full. This contract was drawn by the Attorney-General of Utah, was approved by the Governor and signed by the highest state officials, constituting the Road Commission. It contains the most unequivocal expressions of indorsement of the route and the wisdom of the decision jointly arrived at. We wish to bring this contract again strongly to the attention of your Department, not because it is important in weighing one route possibility against another, but because we hope for a solution of the problem which will save to the people of Utah, and to the public of the United States, the benefits of the large sums already spent.

THE GOOD FAITH OF A SOVEREIGN STATE

Relying on the good faith of a sovereign commonwealth, we paid \$125,000.00 toward the accomplishment of a great and importantly needed work. We do not feel that the people of Utah will wish to forever rest under the stigma which attaches to having coldly repudiated a state contract.

Correspondence passing between the officials of this Association and the Governor of Utah and the state's highway officials in 1919 and 1920, which is provided in full in the Appendix (A), following the contract, establishes clearly that the State of Utah at that time had no thought of taking the position that the contract had been carried out. Note that the cessation of work in 1919 was explained first by the Governor as having been necessitated by needed repairs to the machinery and, later, by lack of funds. It was not until later that other officials of the state hit upon the expedient of claiming that the contract, as they interpreted it, had been carried out, taking this means of evading the fulfillment of the contract. When more funds were offered they were refused.

Have the state officials repudiated any "good faith" guarantee? We have been unable to find methods of legal recourse. Your Department is the court of last resort. Should your Department, by ignoring the state's commitment, permit and sanction the abandonment of the Lincoln Highway in Utah, and the resultant waste of the money contributed by this Association, not only for improvement in Utah, but for all of those sections in Nevada which the Utah section alone makes of effective value, no further recourse is possible.

We submit, Mr. Secretary, that your Department is expressly charged and empowered by Congress to act as a higher court than state highway authorities on matters involving highway improvement. The existence of this contract between the Association and the State of Utah merits, from every standpoint, the careful consideration of your Department before its utter repudiation is permitted, for your Department alone has the power to enforce its provisions or to require satisfactory restitution.

JUSTICE TO THE ASSOCIATION

If for any reason the weight of the evidence which we have with such care brought together for your consideration in this Brief, should be insufficient to overthrow the demand of the present administration in the State of Utah, and it becomes your decision to permit

the abandonment of the important Lincoln Way connection to Ely and to foster and aid the opening of the route to Wendover, we submit that it is clearly incumbent upon your Department to require of the State of Utah, under such circumstances, that this Association be reimbursed in full by the state for the funds paid over to it under the contract which, under such circumstances, will be utterly repudiated.

Nor will such repayment in the sum of \$125,000.00 reimburse this Association to the extent of more than 50 per cent of the funds expended in the carrying out of the whole great plan, of which the Utah link was but a part, which was fully agreed upon between Utah, Nevada, and this Association, and which Nevada has carried out in good faith. Under no circumstances would our funds have been contributed to aid Nevada in improvement between Ely and the California line had it not been certain, insofar as guarantees of state governments made possible, that that route would be the first to be opened and the one to be forever regarded as the primary through route for the transcontinental travel between Salt Lake City and the Pacific Coast.

Of no less importance than any of the foregoing is the question: "Does the good faith of a sovereign unit of these United States mean anything? May a state government, hedged by laws forbidding legal redress—which imply that honor is sufficient guarantee—with impunity ignore such guarantee?"

President Harding, whose interest in this organization's work and whose cordial indorsement of its basic principles we have mentioned, recently, in his message to Congress, made a significant statement in referring to the happy agreement between Great Britain and the United States in the matter of the payment of the British debt, when he said, "It is a re-committment of the English-speaking world to the validity of contract."

Here in this instance, involving relatively insignificant sums, is involved again, however, that great principle of validity of contract, which the President so strongly stressed. Can it in one instance be commended and in another disregarded?

APPENDIX

HERE is provided the full text of the various letters, contracts, resolutions and other documents to which reference was made or from which extracts were quoted in the Brief.

A

The Contract Between the State of Utah and the Lincoln Highway Association, Together With Some Pertinent Correspondence Relating Thereto

The following is a correct copy of a resolution passed by the State Road Commission of Utah at its meeting held March 21st, 1918.

Moved by Commissioner McGonagle,

Seconded by Commissioner Shields. Passed:

WHEREAS, The Lincoln Highway Association, a corporation organized under the laws of the State of Michigan, with its principal offices in Detroit, Michigan, has made certain offers to the State of Utah for the advancement of sums of money, aggregating \$125,000.00 for the completion of two sections of road, one between Clover and Orr's ranch, Utah, and one between north end of Granite Point and Black Point, Tooele County, Utah; and

WHEREAS, It is agreed that in constructing these two necessary links in the route selected and thereby eliminating some 50 miles of the worst road conditions now existing on the Transcontinental Highway, the Utah State Road Commission will accomplish a work of the greatest benefit, not only to the State of Utah, but to the United States, in linking this great national strategic highway, with its resources and its people, to the states on the east and west and to the Atlantic and Pacific coasts, thereby complying with the recommendations of the National Council of Defense in bringing the Utah section of the Lincoln Highway into proper condition; and

WHEREAS, We see in this construction, now, more than ever before, the keystone of the Lincoln Highway arch, the most necessary step to be taken to provide a through route of an American highway transportation system; and

WHEREAS, Through our patriotic desire and support we believe that this construction will provide the only immediate opportunity for the Lincoln Highway Association and the State Road

Commission of Utah to co-operate in achieving a result of vast national importance; and

WHEREAS, The State Road Commission of Utah is willing to accept the money tendered, in consideration of the fact that the State Road Commission shall be allowed to make the construction requested and required, and in full compliance with the general road policy of the State of Utah.

NOW, THEREFORE, BE IT RESOLVED, By the State Road Commission of the State of Utah, in regular meeting assembled, this 21st day of March, 1918, that the offer of \$100,000.00 by the Goodyear Tire and Rubber Company and by Mr. F. A. Sieberling, its President, for the construction of that part of the Lincoln Highway hereinafter particularly described, to-wit:

Commencing at a point in Tooele County, Utah, known as the north end of Granite Point at Granite Mountain; thence in a westerly direction for a distance of approximately $17\frac{1}{2}$ miles, to a point known as Black Point, in Tooele County, Utah, which said points are the termini of the shortest distance across what is known as the Great Salt Lake Desert,

be accepted, and a roadway be constructed, not less than eighteen feet in width and not less than one foot in elevation of natural dirt soil, covered with a gravel surface of not less than eight inches in depth at the center, nor less than twelve feet in width, or of greater width if so determined by the State Engineer of Utah upon further investigation; also

BE IT RESOLVED, That the offer of \$25,000.00 from Mr. Carl G. Fisher for the construction of that portion of the Lincoln Highway from Clover, Tooele County, Utah, toward Orr's ranch, via what is known as Johnson Pass, be accepted. Said \$25,000.00 is to be used in constructing a safe mountain highway with double track turnouts, with suitable bridges to be erected where needed, the funds to be applied where most necessary as indicated by said State Road Commission after investigation and recommendation by the State Engineer, said construction to cover a distance as may be determined upon further investigation, but in no case shall said funds be applied on a section or sections, the total construction exceeding six miles in length.

The condition upon which said money is tendered to the State of Utah, and accepted by it, to be that said road, for the entire distance between Clover, Utah, and the Utah-Nevada state line, via Overland Canyon, shall be designated as a state highway by the State Road Commission on or before the date that construction shall actually begin thereon, the State of Utah first having secured proper right of way where such construction is to be made.

FURTHER, That a road connecting the west terminus of the Seiberling section and the present road through Overland Canyon

shall be opened up and made passable for motor propelled vehicles by the State of Utah; and that a road from Johnson Pass, at the end of the Fisher construction, and west to Granite Mountain, be put in good passable condition for travel, in order to connect the Seiberling-Fisher memorial sections. Also that a connection be made by the State of Utah between the east terminus of the Fisher section and the town of Clover, Utah.

There shall be deposited with the State Treasurer of the State of Utah, as an evidence of good faith by said Seiberling and said Fisher, on or before the 1st day of May, 1918, or by the Lincoln Highway Association as their representative, fifty per cent of the gross amount of money herein appropriated; and the remaining fifty per cent shall be likewise deposited on or before the time when actual work shall have been commenced.

Said work shall be continued and completed not later than the first day of July, 1919.

The providers of the funds herein referred to and hereby accepted by the State of Utah shall be furnished with duplicate copies of the disbursement sheets kept in the office of the State Road Commission of Utah, showing the application of said money and the detailed items of expenditure as the work shall progress, which said statement shall be furnished monthly.

The desert section herein referred to shall be known and designated either as the Goodyear or Seiberling section as Mr. F. A. Seiberling shall hereafter determine; and Johnson Pass shall hereafter be known and designated as Fisher Pass, or by such other designation as Mr. Carl G. Fisher shall hereafter determine.

Said Seiberling and Fisher are hereby given authority to construct, at their own expense, at the termini of, or at such other places along such sections, suitable markers, monuments or arches for the designation of said respective sections in connection with the work herein referred to.

The Lincoln Highway's representatives are hereby given authority to inspect the work on said highway while the same shall be in progress of construction under the direction of the State Engineer and the State Road Engineer, respectively.

FURTHER, Said Seiberling section, after completion, shall be kept closed to all travel until officially dedicated, jointly, by the officials of the State of Utah and of the said Lincoln Highway Association.

In consideration of the construction made by the State of Utah, whereby the Fisher and Seiberling sections are connected with and made a part of the State Highway system of Utah, it is agreed that Mr. F. A. Seiberling shall pay to the State of Utah for the proper upkeep of the Seiberling section such bills for maintenance as the State of Utah shall render, said amount at no time to be in excess of Five Thousand (\$5,000) Dollars per year, nor for a longer period than five years, beginning with the year 1920.

IT IS AGREED that the State of Utah shall begin construction of the desert or Seiberling section not later than September 1, 1918, and failing so to commence work, all moneys deposited under this agreement, together with interest thereon at two per cent per annum, shall be returned to the donors by the State of Utah on demand, after October 1, 1918. It is understood that work having once been begun it shall be continued with reasonable diligence until the same shall have been completed.

IN WITNESS WHEREOF, We, the undersigned, have hereunto attached our signatures, this 21st day of March, 1918.

STATE ROAD COMMISSION OF UTAH,
HARDEN BENNION,
Vice-Chairman and Sec. of State.
DAN B. SHIELDS, *Attorney-General.*
JOSEPH RIRIE, *State Auditor.*
G. F. MCGONAGLE, *State Engineer.*
THE LINCOLN HIGHWAY ASSOCIATION,
By F. A. SEIBERLING, *President.*
THE GOODYEAR TIRE & RUBBER CO.,
F. A. SEIBERLING, *President.*
THE LINCOLN HIGHWAY ASSOCIATION,
CARL G. FISHER, *Vice-President.*
THE LINCOLN HIGHWAY ASSOCIATION,
A. F. BEMENT, *Secretary.*
CARL G. FISHER.

Attest:

IRA R. BROWNING, *State Road Engineer and Secretary.*

**Nevada State Consul Advises Governor Bamberger of Utah
That Desert Work Has Been Stopped
Sept. 27th, 1919**

Ely, Nevada, Sept. 27, 1919.

Hon. Simon Bamberger,
Governor of Utah,
Salt Lake City, Utah.

Dear Governor:

Last week I made quite an extended trip through central Utah, returning via Fisher Pass and the Seiberling cutoff.

As I was going down the western side of the pass I met the road gang coming up, with all their machinery loaded; I asked them whether they were moving camp and they told me some of the Road Commission had been through that day and ordered all work stopped on the pass. As the road had been touched up a little clear down to Orr's fence, I concluded possibly a change of plans was in contemplation, and possibly different machinery was to be used. The road along Orr's fence—the last 3 miles into the ranch—is just barely passable and that's all.

At the desert job I found everything progressing as usual with the addition to the machinery of 7 trucks; the graveling has been carried about half way across. Everything seemed to be strung out nicely, and the gravel pit showed better than I had ever before seen it.

Last night a local autoist came in to see me, having crossed the cutoff the day before, and told me all work had ceased at the cutoff and that one of the men told him the camp was being broken up, the machinery was being taken down and that the entire equipment had been ordered taken to Gold Hill and loaded for shipment.

Believing there must have been some misunderstanding, I am taking the liberty of writing to you, knowing that you have always been in accord with this work and believing you can best correct any misunderstanding that may exist.

It would surely be poor business to destroy the fine organization now on that work, move the machinery twice—for I am confident none better could be devised for the work in hand—and lose all the good season just ahead—the very best part of the year for gravel spreading.

You will recollect the agreement made between Mr. Seiberling and the Road Commission provided—"that work once having been begun it shall be continued with reasonable diligence until the same shall have been completed."

To this the good faith of the State of Utah is pledged and I am confident your friendship with Mr. Seiberling contemplates this shall be fulfilled in the spirit in which the contract was made and in accord with the generosity which provided a part of the cost.

It is barely possible an understanding may have been arrived at between the Road Commission and Mr. Seiberling relative to this cessation of work and that I have not been advised of same, but I am writing you first that no unnecessary expense may be incurred by Utah unless such an agreement has been made.

Nevada is looking forward to the completion of this job just as it would to the arrival of a new railroad, and I feel that Utah, too, will feel a pride of achievement equal to ours, and that all of us want to see the completion of the work at the earliest possible moment consistent with economical operation. I can not conceive how the last could be accomplished by cessation right now.

Mr. Ostermann is expected to reach Ely on the 30th inst. and will doubtless pay you a visit during the coming week.

With assurance of my highest regards, I beg to remain,

Very truly yours,

G. S. HOAG,
Nevada State Consul.

**F. A. Seiberling, President, The Lincoln Highway Association
Inquires of Governor Bamberger Regarding
Cessation of Construction
Oct. 2nd, 1919**

The Honorable Simon Bamberger,
Governor, State of Utah,
Salt Lake City, Utah.

October 2, 1919.

My dear Governor:

Mr. Hoag, our Nevada Consul at Ely, sends me copy of a letter addressed to you September 27, and I am rather startled at the information it contains.

While it is true that the State of Utah has not carried out its contract with the Highway Association and myself according to its terms, the delay has not given me serious concern, knowing that conditions arise that cannot be foreseen, which would operate to delay your program; but if, as a matter of fact, the work has been abandoned as indicated in Mr. Hoag's letter, I feel that I ought to know the reason and the intention of the State with reference to completion of the work as provided in our agreement.

May I have a word from you upon the subject at your earliest convenience?

With warmest personal regards, believe me—

Yours very truly,

F. A. SEIBERLING,
President, The Lincoln Highway Association.

FAS:J

**Governor Bamberger Explains Reasons for
Stopping Road Work on Desert
Oct. 16th, 1919**

STATE OF UTAH
Executive Office
Salt Lake City

Mr. F. A. Seiberling,
President,
Lincoln Highway Association,
Akron, Ohio.

October 16, 1919.

My dear Mr. Seiberling:

I have your letter of October 2nd and in relation to work on the Lincoln Highway in the western part of the state.

The suspension of activities there at this time are brought about by a report presented to the Road Commission by the State Highway Engineer to the effect that practically all of the equipment was in very bad condition and would have to come to the shops immediately for repairs. The equipment in working condition was so limited that the Commission felt the work could not be continued except at an unusually heavy expense. Inasmuch as the winter season is

near at hand, it was deemed advisable to stop all the work for the time being rather than incur an extraordinary expense and accomplish little or no results. The matter of resuming work has not been given consideration by the State Road Commission and probably will not be taken up until my return from the east.

I am leaving today for an extended business trip to New York and Washington and other eastern points and if time will permit, it is probable I will see you before my return to Salt Lake.

With kindest personal regards, I am,

Sincerely yours,

SIMON BAMBERGER, Governor.

**Mr. Seiberling Asks When Work Will Be Resumed
Jan. 24th, 1920**

The Honorable Simon Bamberger,
Governor, State of Utah,
Salt Lake City, Utah.

January 24, 1920.

My dear Governor :

In your letter of October 16th you stated that it was found necessary to stop all work for the winter season, indicating that upon your return from the East the question of resuming operations would be taken up with the State Road Commission, and that you might be able to see me on your return West.

I am very anxious to see this work completed as early this year as it is practicable to do so, and should like to know the existing status, whether the date of resumption has been fixed and when the work will probably be completed.

I regret exceedingly that you were not able to stop over enroute, particularly if you had Mrs. Bamberger with you, our family not forgetting the very pleasant stay you made us a year ago and desiring to meet you both again whenever it may be possible for you to stop over.

With kindest personal regards, I am,

Yours very truly,

F. A. SEIBERLING.

**Governor Bamberger Explains Willingness to Complete
the Road and Reason for Delay
Feb. 3d, 1920**

STATE OF UTAH
Executive Office
Salt Lake City

February 3, 1920.

Mr. F. A. Seiberling, President,
Goodyear Tire and Rubber Company,
Akron, Ohio.

My dear Mr. Seiberling:

Upon my return from the East a few days ago I found your letter of January 24th in relation to renewal of work on the Lincoln Highway in western Utah. I have discussed the matter with other members of the State Road Commission and while there is a willingness to continue the work we are handicapped seriously because of a lack of funds. Not only has the heavy increase in cost sadly depleted our road funds to the extent that we are now unable to meet certain Federal appropriations, but we are also confronted with a serious depreciation in bond values which prevents us from selling our State Highway bonds at this time. The best offer we are able to get for our 4½ per cent State Highway bonds is about \$90.00, and inasmuch as we have no authority to sell these securities below par, we find ourselves in a decidedly difficult position.

Pursuant to the suggestion I made last fall, we shall be only too glad to continue the work on this Goodyear Section if you can see your way clear to make available the \$25,000 granted for maintenance purposes. We would accept such an arrangement with the stipulation that the State of Utah take off your hands all obligation for future maintenance of the road.

I had hoped while in the East I could find it convenient to return by way of Akron and stop there for a friendly conference, but conditions arose which precluded such an itinerary.

I am now hopeful that you may find it convenient to pay us a visit within the next few months, if you are in the western country.

With kind personal regards, I am,

Yours very truly,

SIMON BAMBERGER.

**Mr. Seiberling Asks If He Can Aid Progress
By Buying State Bonds
Feb. 7th, 1920**

The Honorable Simon Bamberger,
Executive Office,
Salt Lake City, Utah.

February 7, 1920.

My dear Governor:

I have your letter of the third and can quite understand how without funds no work can be done on your highways.

To assist you in building the Goodyear Section and that part of the road that you were expecting to improve east thereof, I feel that I would be inclined to purchase bonds at par for the amount that will be required to do this work, if the amount is not too large. Would you be able to complete the work within the next three months if funds were supplied on such an arrangement?

Yours truly,

F. A. SEIBERLING.

**Utah State Highway Engineer Replies Emphasizing
State's Financial Difficulties
Feb. 21st, 1920**

STATE ROAD COMMISSION OF UTAH

State Capitol

Salt Lake City, Utah

Mr. F. A. Seiberling, Pres.,
Goodyear Tire and Rubber Co.,
Akron, Ohio.

February 21, 1920.

Dear Mr. Seiberling:

Your valued favor of February 7th, addressed to Governor Bamberger, came during his absence and has been referred to this office for reply.

I took the liberty of bringing this matter before the State Road Commission at a meeting held yesterday, and I was instructed to advise you that owing to the increased cost of labor and materials, the State Road Commission finds itself unable to carry out the program of state road construction adopted in the spring of 1917, estimates and apportionments of funds to projects having been based on costs obtaining at that time.

The state has improved the Lincoln Highway from Black Point at the west end of the Seiberling Section via Gold Hill to the Nevada line, and it was hoped that additional funds could be made available for the improvement of the connecting section between the Fisher and Seiberling Sections this year; but the outlook at this time is anything but encouraging, and no definite assurance can be given as to what can be done in this direction.

Were the state able at this time to dispose of its unsold bonds

at par, there would still remain a deficit of \$1,302,875.00 in order to construct the highways provided for in the program adopted in the spring of 1917, which represents the increase in cost of labor and materials since that date.

Yours very truly,

IRA BROWNING,
State Road Engineer.

**Mr. Seiberling Calls Attention to the Contract and the
Importance of Desert Road
March 5th, 1920**

Mr. Ira R. Browning,
State Road Engineer,
Salt Lake City, Utah.

March 5, 1920.

My dear Mr. Browning:

I have been absent from the city and returning, find your letter of the 21st in response to my letter to Governor Bamberger.

I understood the state's financial condition substantially as you put it, but you do not answer my question as to whether the state would be willing to sell me the bonds at par in an amount necessary to finish what you term the Seiberling Section, which is the seventeen and a fraction miles of desert ground. I am more concerned about this section than the piece east thereof to Fisher Pass.

If the Governor has returned, will you be kind enough to take the matter up with him again, with a view to devising some plan by which the desert section may be completed now, and the road east thereof can be taken care of at some convenient time. We have invested our money in accordance with a contract entered into with the State of Utah, have in good faith carried through our obligation, and I feel that we are entitled to have the state carry out its part of the agreement if it is possible for it to do so.

Yours truly,

F. A. SEIBERLING.

**Utah State Highway Engineer Explains Reason for
State's Delay in Completing Contract
March 12th, 1920**

STATE ROAD COMMISSION OF UTAH
State Capitol
Salt Lake City, Utah

Mr. F. A. Seiberling, Pres.,
Goodyear Tire & Rubber Co.,
Akron, Ohio.

March 12, 1920.

Dear Mr. Seiberling:

Replying to your favor of March 5th in which you recall the generous offer made by you in your letter of February 7th to purchase bonds at par sufficient to carry through to

completion the Seiberling and Fisher Sections of the Lincoln Highway, you are advised that in the last paragraph of my letter to you under date of February 21st, attention to which is now directed, I advised that the state finds itself facing a deficit of \$1,302,875.00 and the taxpayers of the state are insisting that retrenchment be made on such roads as the Lincoln Highway west of Salt Lake City, which are classed as tourist highways and of little or no benefit to the residents of the state or even the counties through which they pass. The State Road Commission is now holding daily meetings with the county commissioners from different parts of the state, in an effort to readjust the plans for highway construction heretofore adopted, and in nearly all of the counties it is apparent that our plans for this year's construction will of necessity have to be curtailed to the extent of nearly 50%.

This situation is due almost entirely to the increased cost of labor and materials, as the present program was approved in the spring of 1919 and the estimates based on prices prevailing in 1918.

Trusting this explanation will serve to make clear the impossibility of attempting to complete the Tooele County section of the Lincoln Highway during the present year, I am,
Sincerely,

IRA R. BROWNING,
State Road Engineer.

B

Official Memorandum Increasing Wendover Road Estimate
BUREAU OF PUBLIC ROADS

Date—February 15, 1923.

Memorandum to Mr. MacDonald
From L. I. Hewes.

Referring to previous conversations regarding the estimate of the Wendover cut-off, after conversation with Mr. Kittredge I believe it is advisable to increase the estimate between Wendover and Knolls, Section 11, by \$80,000. This increase will permit a higher fill, if found desirable, and will allow for any unforeseen contingencies.

L. I. H.

C

A Resolution Formally Passed by the Board of County
Commissioners of Tooele County, Utah
September 4, 1922

WHEREAS, A majority of the tax-payers of Tooele County are opposed to the expenditure of County money for construction of the proposed Victory Highway across Tooele County; but are in favor of completing the Lincoln Highway in due

time and under satisfactory conditions, and are also in favor of necessary maintenance of local roads throughout the County; and in order that their attitude in these matters may be truly and officially and publicly expressed, it is hereby,

RESOLVED, By the Board of County Commissioners, that Tooele County will refuse to participate in the work of locating, constructing, or maintaining the Victory Highway, or any other transcontinental road on or along the so-called Wendover route; that the Lincoln Highway as officially located and partially constructed, is the choice of the people of Tooele County for a transcontinental road through Tooele County, and that the timely completion, under satisfactory conditions of said Lincoln Highway will best serve the interests of Tooele County; that for the present no money will be expended on roads in Tooele County except for maintaining its local roads in reasonably passable condition, and it is hereby further resolved that copies of this resolution be immediately sent to the Federal Bureau of Public Roads; the State Road Commission of Utah, the Governor of Utah, the Victory Highway Association, and to such others as may be interested. Chairman C. Alvin Orme, P. C. Gillett, voting yes. G. M. Mathews votes no. Carried.

D

**Assembly Joint Resolution (No. 2)
Introduced by Mr. Jurich, Passed by the Legislature
of the State of Nevada
January 29, 1923**

WHEREAS, The State of Nevada has adopted a program of highway construction designed to afford interstate as well as intrastate communication, and has designated two connections with the State of Utah and six connections with the State of California; and

WHEREAS, The State of Utah has failed to provide a connection with route 2 of the Nevada highway system, commonly known as the Lincoln Highway, thereby depriving a large majority of the people of central and southern Nevada of the benefit of interstate communication and travel; and

WHEREAS, The Lincoln Highway Association has contributed the sum of \$125,000 toward road construction in western Utah and a like sum for construction in Nevada; and

WHEREAS, The refusal of the State of Utah to include the Lincoln Highway in western Utah as a part of its Federal aid highway system will result in a complete loss of the money so invested, and deny to the State of Nevada the benefit of communication with its natural sources of supply; and

WHEREAS, In April, 1922, the Governor of Nevada, the department of highways and over thirty chambers of commerce, boards of county commissioners and other civil and civic bodies joined in a request to the State of Utah that it include the Lincoln Highway in western Utah in its Federal aid highway system, and said request was ignored; therefore,

Be it resolved by the Assembly of the State of Nevada, the Senate concurring, That the State of Utah is hereby requested to include in its Federal aid highway system that particular road in western Utah commonly known as the Lincoln Highway and connecting with route 2 of the Nevada highway system at or near Ibapah, Utah, thereby providing for the people of southern and central Nevada the means of communication they require for their prosperity and welfare.

Be it further resolved, That the secretary of agriculture be and he is hereby requested to take official notice of this request of the State of Nevada, and that certified copies of this resolution, bearing the great seal of the State of Nevada, be transmitted by the governor of Nevada, to the governor of Utah, and to the secretary of agriculture immediately on the approval of this resolution.

E

**A Petition Directed to the Governor of Utah by the Governor and the
Department of Highways of Nevada and by Many
Utah, Nevada and California Counties
and Organizations**

March (various dates) 1922.

Hon. Chas. R. Mabey,
Governor of Utah,
Salt Lake City, Utah.

Dear Sir :

WHEREAS, The recently enacted Federal Highway act provides that each state shall designate roads which alone shall receive Federal aid until all so designated are completed, the construction of which will require from ten to fifteen years; and

WHEREAS, Utah, being the eastern gateway to all of Nevada, it is vitally important to Nevada that the Utah connections adequately serve all parts of Nevada; and

WHEREAS, The program for Federal aid heretofore submitted by Utah does not provide the most direct avenue possible to a very large number of cities and towns in central Nevada, localities which, through lack of transcontinental railways must depend on highways for east and west communication; and

WHEREAS, The Lincoln Highway is the main correlating highway across Nevada, directly serving such important communities as McGill, East Ely, Ely, Ruth, Kimberly, Hamilton,

Eureka, Austin, Fallon, Hazen, Reno, Carson City and Lake Tahoe and also forming direct connection by improved highways with Pioche, Lund, Preston, Tonopah, Goldfield, Hawthorne, Yerington, Minden, Virginia City, Gold Hill, and Dayton, thereby serving about 90 per cent of the population and business interests of Nevada; and also serving Gold Hill and Ibapah in Utah and the Yosemite and Owens river valleys in California; and

WHEREAS, The only western outlet which Utah has heretofore designated will not provide a direct connection with the Lincoln Highway route across Nevada; and

WHEREAS, Nevada has designated the Lincoln Highway route for Federal aid; and

WHEREAS, The business prosperity of central Nevada depends largely on securing direct communication with Salt Lake City, thereby more closely cementing the business relations of Nevada and Utah; and

WHEREAS, The failure of Utah to provide a direct connection with the Lincoln Highway's route across Nevada would tend to alienate the friendly business relations between those two states; and

WHEREAS, The Lincoln Highway Association has heretofore given large sums of money to Utah and Nevada to assist in constructing its route across those states, relying on the gratitude and good faith of both states to include such improved portions in their interstate roads; and

WHEREAS, Every section of the Lincoln Highway between the Atlantic and Pacific oceans, except that portion lying in Tooele county, Utah, has been designated as part of the Federal Highway system; and

WHEREAS, The Federal aid act provides that all state designations are tentative and subject to change until approved by the Secretary of Agriculture, which approval has not yet been given;

NOW, THEREFORE, we hereby petition that you request and cause the State Road Commission of Utah to so reallocate its Federal aid program as to provide Federal aid on the road via Tooele, Fisher Pass, Granite Mountain and Ibapah, known as the Lincoln Highway route.

(The several originals were presented to Governor Mabey on April 10, 1922, signed copies being also sent to the Bureau of Public Roads, where they are now on file for your inspection.)

Copies of the above resolution were signed, severally, by:

Hon. Emmet D. Boyle, Governor of Nevada.

The Department of Highways, State of Nevada.

Reno, Nevada, Chamber of Commerce.

County Commissioners of Nye county, Nevada.
County Commissioners of Ormsby county, Nevada.
County Commissioners of Douglas county, Nevada.
County Commissioners of Lincoln county, Nevada.
County Commissioners of White Pine county, Nevada.
County Commissioners of Churchill county, Nevada.
County Commissioners of Storey county, Nevada.
Ely, Nevada, City Council.
Dayton, Nevada, Improvement Association.
Board of Trustees of Carson City, Nevada.
Pioche, Nevada, Commercial Club.
Lander County, Nevada, Grazing Association.
Toiyabe Wool Growers' Association, Nevada.
Chamber of Commerce, Austin, Nevada.
Truckee-Carson Irrigation District, Nevada.
Commercial Club, Minden, Nevada.
Carson Valley Highway Association, Nevada.
Tonopah Mine Owners' Association, Tonopah, Nevada.
The Greater Carson Club, Carson City, Nevada.
Chamber of Commerce, Ely, Nevada.
Comstock Chamber of Commerce, Nevada.
Gold Hill and Deep Creek Community Club, Utah.
County Commissioners, Tooele County, Utah.
City Council of Tooele, Utah.
Chamber of Commerce, Livermore, Calif.
El Dorado County (Calif.) Chamber of Commerce.
Chamber of Commerce, Tracy, Calif.
Board of Trustees, Town of Hayward, Calif.
Hayward Real Estate Board, Calif.
Board of Supervisors, El Dorado County, Calif.
Board of Trustees, City of Placerville, Calif.

F

**An Act Passed by Both the Senate and the Assembly of the
Legislature of the State of Nevada
March 15th, 1923**

AN ACT

Designating a primary route of a highway through the State of Nevada and repealing all acts in conflict therewith.

The People of the State of Nevada, represented in Senate and Assembly, do enact as follows:

SECTION 1. The route known as the Lincoln Highway route through the State of Nevada is hereby designated and shall be the primary route or road through, across and in the State of Nevada in conformity with any United States or state law providing for such designation.

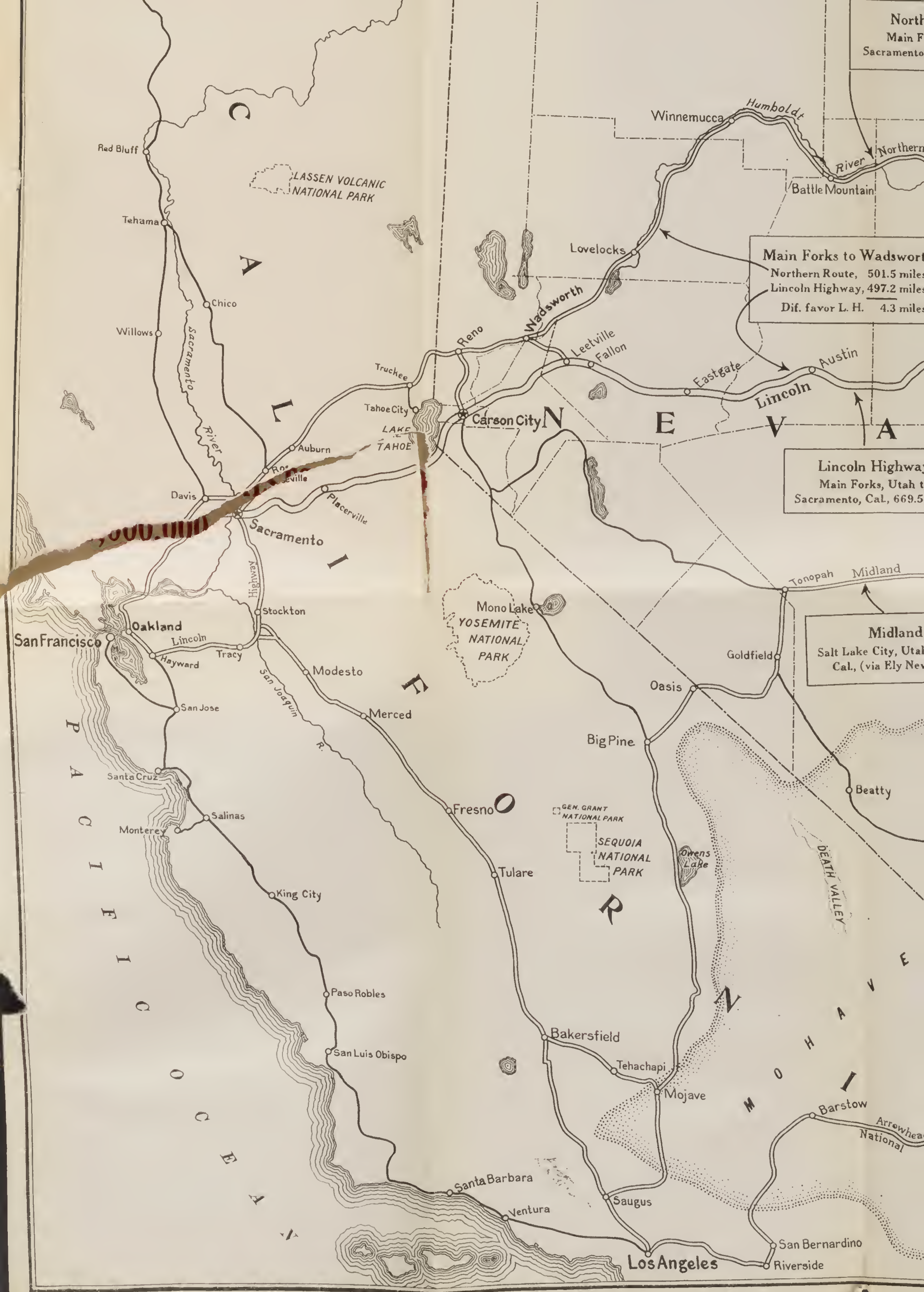
H

TOURIST REGISTRATION AT UTAH STATE AUTOMOBILE ASSN. OFFICE—SALT LAKE CITY—FROM JANUARY 1st TO DECEMBER 31st, 1922

Arrived From East
Via

	L. H.	M. T.	P. P.
January	4	2	...
February
March
April	17	5	...
May	142	48	10
June	811	132	91
July	1,040	123	471
August	1,654	224	512
September	1,493	14	331
October	551	136	156
November	80	29	21
December	23	11	2
Actual Registration	5,815	724	1,594
Multiplied By Four for Estimated Totals			
	23,260	2,896	6,376

L. H.—Lincoln Highway.
M. T.—Midland Trail.
P. P.—Pike's Peak.





LINCOLN HIGHWAY ENTITY NOW AT STAKE!

**Clean-Cut Issue Before Secretary Wallace
for Decision**

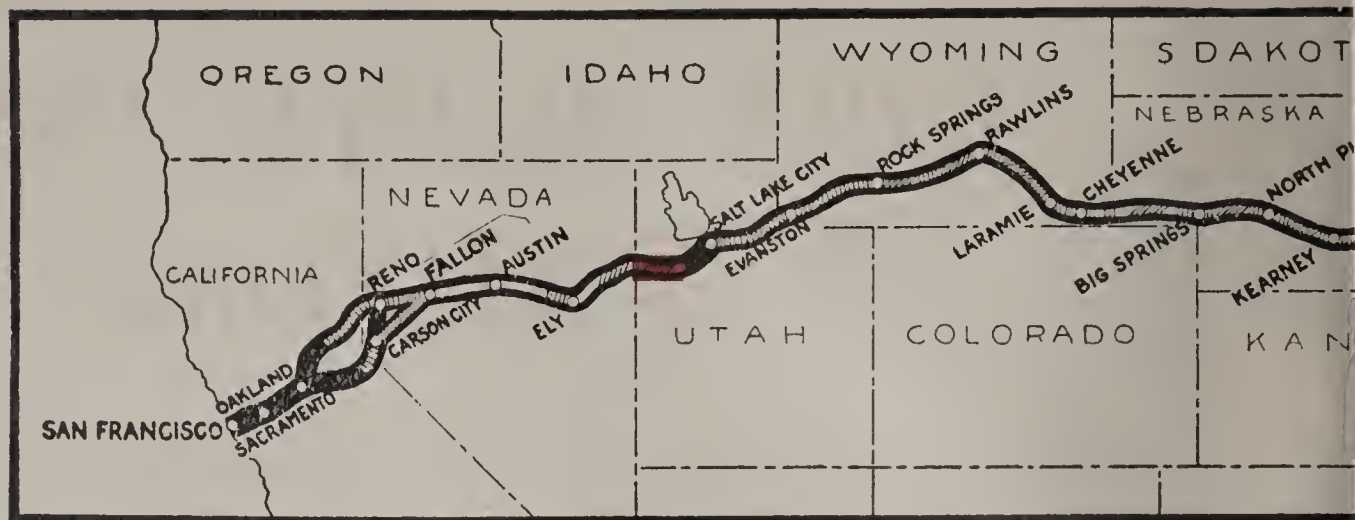
**Shall Lincoln Way Be Transcontinental
Route—or a Road from New York City
to Salt Lake City Only?**

**UTAH WOULD BALK
\$70,000,000 ENTERPRISE
NOW 65% COMPLETED**

**Tourist Dollars Form Stake In Gigantic Game
of Road Strategy Involving Area Size of France**

**Should Roads Best Serve Travel—or Travel
Be Forced to Follow Roads Located
to Serve Local Advantage?**

**MOTOR TOURISTS SPEND
\$100,000,000 A YEAR IN THE
WEST NOW!**



The States traversed by the Lincoln Way between New York and San Francisco have been marked on the map. The issue now is: Shall the Lincoln Highway end at Salt Lake City, or shall it be completed to the Great Plains?

The Last Gap in the Lincoln Way

THE question of completing the "Main Street of the Nation" westward from Salt Lake City has reached the highest governmental authority. It is before the Secretary of Agriculture at Washington for final decision. The sole remaining barrier to through travel lies in western Utah.

If Secretary Wallace follows the wishes of the State of Nevada as formally expressed, the Lincoln Highway entity will be saved. If he follows the demands of the present Utah political regime, the Lincoln Highway will cease to be a transcontinental road! It will end at Salt Lake City, Utah.

The Lincoln Highway and its delta of connecting roads in the West carry a traffic valued at \$100,000,000 a year! Motor tourists distribute in the areas tributary to the main route through the western playgrounds, by those areas' own estimates, that amount yearly **now!**

The imminent abandonment of the Lincoln Highway west of Salt Lake City and the providing in lieu thereof of routes which will forever less favorably meet the needs of a large part of the immense through travel, is more serious than many realize.

The Lincoln Highway Association is not favorably disposed towards seeing a large part of this travel which it has been so largely instrumental in stimulating, and which is out "Seeing America First," discouraged in the effort by being forced to traverse such unattractive and unsafe areas as the Mohave Desert in the torrid heat of Summer, merely to gain for Utah the financial advantage that State is seeking to secure to the detriment of Nevada and of all future travel to California.



ated over \$47,000,000 since 1913 to bring the route to its present stage of improvement.
y, or shall the missing link in western Utah be built and the
s a transcontinental highway?

Future Travel of America Affected

The present Utah administration, contrary to the broad policy of co-operation with Nevada and with the Association, which was continued for eight years by previous administrations, is now making a strong fight to abandon the Lincoln Way. The stake is Utah's own local financial advantage through the construction of routes which will force travel by longer roads through areas it does not wish to traverse.

In this "Brief for the Lincoln Highway" we have made a serious effort to save that carefully located route now so well along towards connecting travelling condition across the continent.

Our Association has expended ten years of time and \$950,000.00 in money to bring into being a road which could form the backbone of an American highway transportation system and stand forever as a memorial to the martyred Lincoln. The existence and the whole plan for this great transcontinental artery are now at stake.

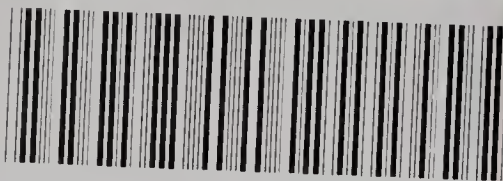
Ten years of study were required to produce this document. It will mean either final success for the great plan founded by "visionaries" ten years ago—or will be the swan song of the organization which fathered and fostered inter-state American highways.

We hope you will find this document interesting.

THE LINCOLN HIGHWAY ASSOCIATION,

Austin F. Bement,
Vice-President and Secretary.

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